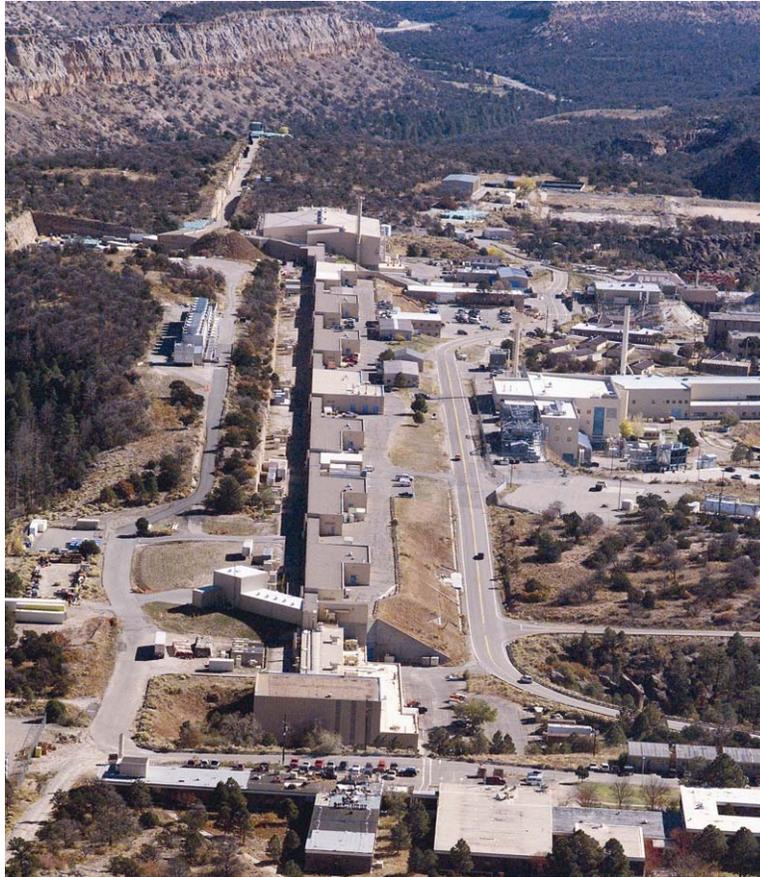


TA53-PL-404-003.R0

Spill Prevention Control and Countermeasures Plan (SPCC)

TA-53/Los Alamos Neutron Science Center (LANSCE)



Effective Date: 6/30/09

Expiration Date: 6/29/12

Contact: LFO-ESH&Q Group Office

REVISION HISTORY

<i>Revision No.</i>	<i>Description of Change</i>	<i>Effective Date</i>
<i>0</i>	<i>New document</i>	<i>6/30/09</i>

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In Conjunction with:

Los Alamos National Laboratory
Water Quality (ENV-RCRA)
and LANSCE Facilities Management

CERTIFICATION

This Plan was developed pursuant to provisions of the federal regulation for oil pollution prevention, 40 CFR Part 112. Its purpose is to provide spill prevention and response measures to prevent the pollution of navigable waters from oil related spills.

In accordance with 40 CFR Part 112.3 (d), this Plan has been reviewed and certified by a Registered Professional Engineer (PE). By means of this certification, the engineer, having examined the facility or having an agent examine the facility, and being familiar with the provisions of this regulation, attests that the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of Part 112. Procedures for required inspections and testing have been established and this Plan is adequate for the facility.

Certified by:

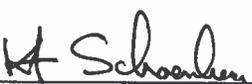


Jennifer Foote
Registered Professional Engineer
North Wind, Inc.

MANAGEMENT APPROVAL

This Plan has the full approval of management at a level with authority to commit the necessary resources. The owner/operator will fully implement this Plan in accordance with the requirements of 40 CFR Part 112.

Facility Owner/Operator Approval:

Approved by:  Date: 6/29/09
Kurt Schoenberg
LANSCE User Facility Director

Approved by:  Date: 06.30.09
Kevin Jones
Responsible Division Leader

Approved by:  Date: 6-18-09
Dan Seely
Facility Operations Director

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1.0 INTRODUCTION

The Spill Prevention Control and Countermeasure (SPCC) Plan is an Environmental Protection Agency (EPA) requirement of the Oil Pollution Prevention Regulation (40 CFR 112). This Plan has been developed to comply with requirements of the regulations and the amendments. 40 CFR 112.1(d)(2)(ii) requires that facilities that have an aggregate aboveground storage capacity of 1,320 gallons or greater of oil, including all containers and equipment 55 gallons or greater, maintain a SPCC Plan. The intent of the SPCC Plan is to prevent oil related spills from polluting navigable waters of the United States (U.S.) through the implementation of adequate prevention and response measures. With regard to Los Alamos National Laboratory (LANL), navigable waters of the U.S. include all canyons, arroyos, streams, and rivers within and surrounding LANL Technical Areas (TAs).

Due to LANL's diverse activities and changing conditions, a single Plan incorporating all LANL facilities subject to SPCC requirements is impractical. SPCC locations are addressed according to specific facility boundaries within LANL as determined by management and funding origination. The Facility Operations Director (FOD) or the facility tenant with approval from the FM, develops, implements, and maintains SPCC Plans for the specific SPCC location(s) within their stewardship.

This SPCC Plan addresses areas that use and store oil within the TA-53 LANSCE Facility. There are currently 125 items of oil filled equipment with a capacity of over 55 gallons and 6 portable container storage areas covered by this plan. Transformers that are operated by the Utilities and Infrastructure (UI-DO) FOD are covered under a separate SPCC.

1.1 Conformance

This SPCC Plan and facility conform to the requirements of 40 CFR Part 112 to the fullest extent possible. The facility has appropriate spill prevention, reporting, and response measures, tanks and secondary containment are appropriate for the materials stored, and there is adequate security. Oil filled equipment does not always have secondary containment but is covered by an Oil Spill Contingency Plan. Procedures for inspections, testing, loading and unloading, record keeping, spill response, and training have been developed.

Future changes at the facility to ensure compliance with regulatory requirements include:

- Install berms at outdoor transformers 53-0049 at 53-0002 to prevent a critical spill from reaching a watercourse before the spill can be detected and cleaned up.
- Install berms at transformers 53-0098 outside of 53-0003, Sector H to prevent a critical spill from reaching a watercourse before the spill can be detected and cleaned up.
- Install locks or otherwise disable master drain valves for out of service electrical equipment
- Relocate 53-1180 building across asphalt lot and implement spill control during transfer operations. Replace 330 gallon containers with ones 225 gallons or less.
- Install locks or otherwise disable drainage valves at secondary containment units (valves may be replaced with petro plugs or similar)
- Repair and regularly inspect and maintain “LEDA big blue” transformers and/or increase containment.
- Replace absorbent booms with spill dikes at 53-0939

In addition to Federal regulations, this Plan complies with the New Mexico Environment Department (NMED) regulations for Ground and Surface Water Protection (NMAC 20.6.2). State water quality standards are considered when determining procedures for secondary containment drainage. This facility has no tanks that fall under the NMED Petroleum Storage Tank Regulations (NMAC 20.5.1-17).

The Certification of the Applicability of Substantial Harm Criteria is included in Appendix A.

1.2 Facility Owner and Operator

The Facility Owner at LANSCE is the Experimental Physical Sciences (EPS) Associate Director and the EPS Deputy Associate Director who acts as the LANSCE User Facility Director. Programmatic groups within the Accelerator Operations Technology (AOT) Division own most of the equipment and/or storage areas and carry the bulk of responsibility for implementation of this plan. LANSCE implementation will include the operation, inspection, and documentation of oil storage areas to include activities such as oil transfers are done in a manner to eliminate potential releases.

The LANSCE Facility Operations Director (LFO-FOD), Facility Management Unit (FMU) 4, is the agent of the LANSCE User Facility Director. As such, the FOD is responsible for safely operating the facilities and for providing responsive and reliable facilities and services to support tenant operational

responsibilities. The FOD is responsible for providing oversight of the initial and continued implementation of the SPCC program at LANSCE.

Facility Owner

Associate Director for Experimental Physical Sciences
 Los Alamos National Security, LLC
 Los Alamos National Laboratory
 Los Alamos, NM 87545

Facility Owner and Operator Contacts

<u>Name</u>	<u>Phone</u>	<u>Pager</u>	<u>Title</u>
Daniel Seely	665-2584	664-1805	Facility Operations Director
Kurt Schoenberg	667-5051	800-605-4220	LANSCE User Facility Director
Kevin Jones	665-2683	949-2071	AOT Division Leader
Dan Rees	665-2802		AOT-RFE Group Leader
Scott Wilburn	667-2107	664-5493	P-25 Group Leader
Patricia Vardaro-Charles	665-4644	104-2479	Environmental Lead
On call FMD	664-7466		On-Call Duty Officer
On call RDL	664-2721		On-call RDL

1.3 Management Responsibilities

The owner/operator is responsible for preparing and implementing the requirements of the SPCC Plan. In addition to requirements specific to storage tanks and containment structures, 40 CFR Part 112 requires the development of procedures associated with inspections, record keeping, training, and Plan amendment. The following sections address implementation of these procedures at the facility.

This table shows the responsibilities that are further described in the SPCC Plan.

		ENV-RCRA	Facility Owner/Operator
General	Prepare SPCC to meet regulatory requirements	X	
	Approve SPCC		X
	Implement SPCC		X
	Approve physical changes needed to implement SPCC		X
	Provide oversight	X	
	Leak and spill cleanup and disposal, provide spill information to ENV-RCRA, update spill log in Plan		X

	Spill reporting	X	
Inspections	Provide qualified personnel to perform and write monthly SPCC walk around inspections		X
	Provide qualified personnel to perform and write annual SPCC inspections	X	
	Implement corrective actions noted in inspections		X
Recordkeeping	Maintain inspections in onsite SPCC		X
	Maintain onsite training records for periodic briefings or Lessons Learned		X
	Update spill tracking form		X
	Review SPCC every five years	X	X
Training	Provide annual training that meets SPCC regulatory requirements	X	
	Ensure all oil handling personnel and designated persons accountable for discharge prevention complete annual training		X
Plan Amendment	Provide information on changes to design, construction, operation or maintenance		X
	Amend Plan when major spill or other change in facility occurs	X	
	Implement changes to plan within 6 months of change to facility		X

1.3.1 Inspections

Procedures for inspections are detailed below; records of each are kept in accordance with Section 1.3.2, Record Keeping. In the event of a problem, the deficiency is documented on the applicable inspection form(s), a report(s) is written and submitted to the responsible manager who must implement corrective action to remedy the problem. Corrective actions are generally initiated through the facility work control process, or through responsible programmatic group actions to address the problem.

Inspection Summary

Type	Frequency	Inspector
Monthly Inspections	Monthly	LANSCE ENV Lead, or Operating Group SPCC Contact
Annual SPCC	Annual	ENV-RCRA
Certified	Not applicable	n/a
Brittle Failure	Not applicable	n/a

Monthly Inspections: Monthly periodic inspections are conducted by the LANSCE Environmental Lead, or operating group SPCC Contact using the appropriate Equipment or Portable Container Storage Area Periodic Inspection Checklist forms in Appendix B. A list containing the areas to be inspected by each inspector is included on the table in Appendix E. The inspections assess items recommended for periodic inspection in SP-001 including: good housekeeping, equipment, and drum exteriors. Equipment will not be taken out of service and will only be inspected for spill potential.

The inspection form and report(s) is/are monthly deliverables from this process where the report and forms address each designated oil storage areas. The form(s) and report are maintained by the LANSCE Environmental Lead as the official TA-53 SPCC site record as required in Federal law 40 CFR 112. and the monthly documentation is also recorded in the TA-53 MESA LIB. The monthly report is sent to the appropriate manager for action when action is necessary.

Annual SPCC Walk Around Inspections: In addition to required periodic inspections, SPCC inspections are performed by ENV-RCRA Water Quality personnel and assess compliance with the SPCC Plan including: training, recordkeeping, changes to the facility, portable container storage areas, the condition of the piping and associated equipment, and the secondary containment unit. SPCC inspections are performed using the SPCC Walk-Around Inspection Form located in Appendix B, and they identify the date the inspection was performed, facility/structure conditions, and identified deficiencies. Completed inspection forms contain the signature of the inspector. In addition, ENV-RCRA personnel will inspect the tank after a “Critical Situation” occurs such as a leak, exposure to fire, or a major storm.

Certified Inspections: In accordance with SPCC regulations a frequency for certified inspections must be determined.

- Oil filled electrical equipment at LANSCE is not necessarily built to an industry standard that specifies a certified inspection schedule. Using SP-001 standards as a guide, oil filled equipment up to 5000 gallon capacity with spill control will not require certified inspections, only periodic inspections described above.
- Per SP-001 standards, portable containers such as steel drums and cubes will be inspected by periodic inspections as described above. Certified inspections are not required for portable containers with spill control.

Brittle Failure and Catastrophe Evaluation: Regulations require an evaluation for risk of discharge or failure due to brittle fracture or other catastrophe for field constructed ASTs that undergo a repair, alteration,

reconstruction, or a change in service that might affect the risk of a discharge or failure.

These tanks are not field constructed ASTs therefore this evaluation is not required at this facility.

1.3.2 Record Keeping

As required by 40 CFR 112.3(e), the SPCC Plan will be maintained at the facility. The complete SPCC Plan shall be located in the office of the Environmental Lead. This includes inspection procedures, completed inspections, drainage records, spill reports, and training records (as described below) that will be retained as part of this SPCC Plan at the facility for a minimum of three years. Each facility that performs inspections will have a file copy for their reference. Following is a summary of how record keeping requirements will be fulfilled at the facility:

- Copies of completed maintenance records, monthly inspection checklists, annual SPCC inspection reports, and certified inspection (if any) reports will be maintained as part of the SPCC in Appendix B. Copies of the completed monthly inspection forms are also maintained within the TA-53 Mesalib electronic records management system.
- SPCC Training records are maintained electronically and can be requested from the LANSCE training office.
- Amendments to the Plan will be recorded in the Amendment Log, Appendix C.
- A copy of spill reports will be retained in Appendix D.
- Secondary Containment Drainage Records will be kept in Appendix F

1.3.3 Training

40 CFR Part 112.7(f)(1) states "Train your oil-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan."

The LANSCE SPCC training program was developed jointly between LANSCE and ENV-WQ. Personnel at LANSCE that handle oil or perform inspections have been identified as oil handlers and have had the following training plans assigned to them: #5801 TA-53 SPCC Plan, and #7055 Institutional SPCC training. The training plans require a yearly refresher. Late training plans are automatically sent to group leaders and division leaders as a reminder that delinquent employees need to complete their

training. As new personnel are assigned to TA-53, managers answer a new employee checklist that asks questions to determine what job specific training is needed for the individual, to include oil handling activities. In this manner, the site will maintain compliance with the training requirements for new individuals. Training records for the individuals assigned the above training plans and records can be requested of the LANSCE training office. Lessons learned for oil spills will follow the normal lessons learned process for TA-53. Divisions with oil handlers at TA-53 include AOT, P, and deployed environmental personnel. Training records are maintained in accordance with Section 1.3.2, Record Keeping.

1.3.4 Plan Amendment

This SPCC Plan will be amended whenever there is a change in facility design, construction, operation or maintenance that materially affects the facility's potential for discharge of oil into or upon the navigable waters of the United States or adjoining shorelines. The Plan will also be amended as necessary if a spill causes a change in design, construction, operation, or maintenance. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs. Amendments to the Plan will be recorded in the Amendment Log, Appendix C.

In addition, in accordance with 40 CFR 112.5(b), a complete review and evaluation of this SPCC Plan will be conducted at least once every five years by the operating group and/or Facility Operations Director, and by ENV-RCRA Water Quality. As a result of this review and evaluation, the SPCC Plan will be amended within six months of the review to include more effective spill prevention and control technology if such technology will significantly reduce the likelihood of a spill event from the facility, and If such technology has been field proven at the time of review.

Changes to the contact lists and the addition of records to the Plan do not require certification by a Professional Engineer. All amendments that address technical changes that may change the facility's ability to discharge oil will be certified by a Professional Engineer.

2.0 FACILITY DESCRIPTION

Technical Area 53 (TA-53), the Los Alamos Neutron Science Center (LANSCE), is located on East Jemez Road at the Los Alamos National Laboratory. The site is located on Mesita de Los Alamos, an east-west trending mesa bordered by Los Alamos Canyon to the north and Sandia Canyon to the south. This facility was established in 1968 and consists of a linear proton accelerator, and associated experimental and support facilities. Activities conducted at TA-53 include subatomic particle and isotope production research, radiochemistry research, solid-state physics research, and accelerator technology development.

There are two aboveground storage tanks, ASTs 53-640 and 53-1058, located to the south and east of building 53-364 that are empty and closed per SPCC and NMED requirements. The Tank Farm adjacent to the lagoons at the east end of TA-53 has been removed. This plan previously also covered storage tank 53-645 and storage tanks within building 18, which have all been permanently closed. There are no buried tanks, partially buried tanks, underground piping, internal heating coils, or transfer stations at the facility.

125 items of oil filled equipment with a capacity of over 55 gallons are located throughout the facility. LANSCE has consolidated its oil storage into 6 drum/portable container storage areas covered by this plan. A summary of equipment and drum or portable container storage areas is below. Appendix E includes maps and a table with expected capacities and contents of each area.

2.1 Oil-Filled Equipment Areas

Location	Description	BMPs
Building 53-0002 (MPF-2)	insulating oil filled electrical equipment	Building is secondary - trench at doors.
Building 53-0002 (MPF-2) outdoors (ETL HV Pad 805 and 201)	Transformers 53-49(two units) and 53-51. The other transformers in the area are operated by Utilities.	Inspection and Spill response: containment adequate to prevent a catastrophic spill from reaching a watercourse until the spill can be detected (such as an earth berm off the transformer pads near the edge of the canyon) must be installed.
Building 53-0003 inside and outside. Sector A-H	Sets of 6 or 7 Modulator tanks indoors with several spares. Sets of transformer, rectifier and inductrol voltage equipment outside on north side of building. Other transformers	Inspection and Spill response: Indoors is monitored daily and serves as partial secondary containment, equipment is maintained.

	in the area are owned by utilities.	Most outdoor equipment leaks could be detected and cleaned before a spill could reach a watercourse, however facility must install a dirt berm or other BMP sufficient to prevent a spill from reaching storm drain near east end of building before the spill can be detected and cleaned up. High Voltage equipment located behind Sector A are within a concrete containment structure. In the future "Petro Plugs" may be used to allow storm water but not oil to drain from the containment area.
Building 53-0003 inside -Sector B cage	Spare equipment for Sector J stored in cage in sector B.	Inspection and Spill response: Indoors is monitored daily and serves as partial secondary containment.
Building 53-0003 Sector J indoors	H+ and H- equipment with transformer fluid, also platform with hydraulic fluid.	Building is lined for containment.
Building 53-0003 Sector J outside	Several out of service transformers are stored here. Drum secondaries stored here are empty.	Inspection and Spill response: also ensure metal secondary containment unit is inspected closely for leaks.
Bldg 53-0003 Sector M or Area A East	1700 gallon oil filled test equipment	Within fabric containment berm 15'x8'x2 Interstate products.
Bldg 53-0018 indoors	Insulating oil filled experimental equip	Inspection and Spill response: Indoors is monitored daily and serves as partial secondary containment with a trench, doors are not bermed. Previously covered oil tanks inside the building including the experimental tank have been drained and closed/labeled empty.
Bldg 53-0028 rm 200	Insulating oil filled equipment	Inspection and Spill response: Building probably ok for secondary, using drip pads for operations containment. In the future drain plugs may be used at critical areas where a spill could enter a floor drain.

Outside off of La Mesita and N of LEDA –(MPF 365 RF Pad / LEDA)	big blue transformers (some are out of service)	They are located within a covered area which drains to a catchment basin with a capacity of 1683 gallons.
Bldg 53-0365 (MPF 365 Mezzanine and high bay)	Insulating oil filled experimental equip	Inspection and Spill response: Indoors is monitored daily and serves as partial secondary containment.
Fraser Dome – MPF-939/ 53-0939	Spare equipment with transformer fluid	Inspection and Spill response: Indoors is monitored three times a week for spills and condition of containment. Building is far from a storm drain and facility will install spill dikes to replace absorbent booms as secondary containment for equipment.



Typical outdoor transformer



Typical indoor oil filled electrical equipment



1700 gal oil filled test equipment in containment berm

2.2 Drum or Portable Container Storage Areas

Storage of oil occurs in 6 designated drum/portable container storage areas listed below. Quantities of oil stored in portable containers changes, expected ranges are listed below in the descriptions. Containers and secondary containment units will be constructed to industry standards compatible with storage of oil. Some unused containment pallets may be stored around the facility.

Location	Description	BMPs
Building 53-0002 (MPF- 2) outdoors	<p>West of Building 2, a mobile tank with a capacity of approximately 500 gallons of transformer oil is stored. This tank is to be removed in the future.</p> <p>North of Building 2, storage of 1-20 drums containing transformer oil. Some drums may be empty or have non-oil contents. Drums are</p>	<p>West side of building: steel secondary containment unit that holds approximately 580 gallons. The storage area is covered to minimize storm water collection in the secondary containment unit, there is no drainage valve.</p> <p>North side of building:</p>

	<p>stored on racks to facilitate spill detection and drum inspection.</p> <p>The mobile tank and drums are in the process of being replaced with 350 gallon steel portable containers. The concrete secondary containment is not adequately sized to contain a spill from the 350 gallon containers so only the steel secondary containment will be utilized.</p>	<p>Concrete curbing secondary containment unit that is adequate to hold approximately 310 gallons. The storage areas are covered to minimize storm water collection in the units; it has a drain valve that has been disabled.</p>
53-1180 (WMC RAD Storage Area north of Bldg 3, Sector A)	Two 300 gallon poly tanks containing used oil. (containers must be replaced with ones 225 gallons or less.)	Prefab secondary containment building-capacity of 228 gallons
Behind Building 53-0315	Storage of between 0-12 insulating oil drums.	spill containment pallets covered with tarps
Bldg 53-0018 outdoors	<p>Outdoor storage west- Approximately 0-28 drums</p> <p>Outdoor storage north- On the north side of building 18: drums; 550, 350, and 330 gallon steel totes filled with insulating oil.</p>	<p>Outdoor storage west-covered containment pallets</p> <p>Outdoor storage north- Steel 15' by 8'-9" by 8" containment structure with capacity of 665 gallons.</p>
Bldg 53-0028 rm 200	0-4 Drums insulating oil	Containment pallet
Outside off of La Mesitia and N of LEDA – (MPF 365 RF Pad / LEDA)	<ul style="list-style-type: none"> Between 1-75 drums of insulating oil on covered secondary pallets on asphalt area to west of big blue transformers. Between 0-6 drums of insulating oil, 300 gal. poly tank, and out of service oil filled equipment is stored in transformers area. This area is covered and drains to a catchment basin. 	<p>parking lot west of transformers: Covered secondary pallets</p> <p>transformers area: covered storage with drainage catchment basin.</p>



Typical outdoor drum storage area

2.3 Security

TA-53 access is restricted to badged personnel. During normal operating hours the entrance is manned, and after hours facility access is obtained through the use of a badge reader. After hours access is provided to Laboratory badged personnel that have a business need for after hours access. LANSCE is routinely patrolled by LANL security personnel. Additionally, facility management personnel are on-site 7 days a week and walk down all areas and structures within the LANSCE Facility. Unlocked master flow and drain valves may be present on some electrical equipment, but electrocution is believed to be an effective deterrent. Out of service electrical equipment with master drain valves will have locks installed. Containment units with drainage valves will have the handles disabled. There are no pumps or pipelines at the facility that require access restrictions. Lighting is adequate indoors and at outdoor areas with oil filled equipment or portable container storage to deter vandals and aid in the discovery of oil discharges

2.4 Facility Transfer Operations

There is no transfer piping associated with the SPCC locations. Transfer operations occur at the facility by way of transferring oil from equipment into drums or other portable containers, from oil containers into equipment, or

transfers occur when oil is moved from one location to another. Regardless of whether an IWD is developed for a task that involves movement of oil, the steps delineated below will be followed for all oil movements:

- Transfer operations are performed by SPCC trained personnel
- Spill control equipment will be present during oil transfer operations to include spill containment kits (always), storm drain covers (if necessary), and portable containment dikes (if necessary).
- Movement of oil filled containers or transfers of oil will not occur during precipitation events
- Containers must be upright and secured to the vehicle/hand truck it is being transported on
- Drums are not to be rolled or tipped, even while empty, to prevent damage to containers
- The containers will be inspected before and after they are transported for leaks or damage.
- Storm drain covers will be used at adjacent storm drains at 53-0018 and behind 53-0315
- Transfers from portable containers to equipment by LANSCE personnel occurs indoors away from storm drains. Spigots or pumps should be used, do not pour directly from drums. Consider placing absorbent mats before a transfer occurs.

Outside contracted maintenance crews will maintain a SPCC onsite for their operations while they are onsite. If no SPCC is available this plan must be updated to include appropriate controls for the procedure. The crews will be made aware of LANL specific spill reporting and cleanup procedures and will be trained to LANSCE/LANL SPCC requirements.

2.5 Secondary Containment Drainage Operations

Storm water accumulation may occur within the secondary containment units and in the containment trench associated with MPF 365 RF pad. If the accumulation must be drained, valves in the containment units will be opened and the units will drain using gravity. Where valves are not present or are not functional, the use of a pump to empty the secondary containment might be necessary. Some containment units may be equipped with Petro Plugs or other devices in the future to allow stormwater but not oil to drain.

Prior to discharge, accumulations must meet federal and state water quality standards. To ensure compliance with these standards, the following steps will be used for secondary containment unit discharge operations:

- Visually inspect accumulation to ensure that the water does not possess oil sheen, odor, or other constituents that could result in a harmful discharge.
- Take a pH reading.

- Notify facility Environmental Lead prior to a discharge.
- Notify ENV-RCRA at 665-2014 to obtain authorization for release and for testing of contaminants other than pH, if necessary.
- Remove the pump after the drainage operation is complete, if a pump is necessary.
- Complete the Secondary Containment Discharge Record form and retain in the SPCC Plan Appendix F

3.0 SPILLS

The following sections provide information on the potential for spill events at the facility and the established procedures to be implemented in the event of a spill. There have been no reportable oil spills at LANSCE. The Operating Group Line Management is the person accountable for discharge prevention and reporting to facility management.

3.1 Potential Spill Predictions

Area	Type of failure (discharge scenario)	Potential Discharge volume (gallons)	Direction of flow for uncontained discharge	Secondary containment method and capacity
Bulk Storage Containers and Mobile/Portable Containers				
Building 53-0002 (MPF- 2) outdoors	Catastrophic	500 for portable tank, 55 for drums. (future 350 gallons)	West to tributary of Sandia Canyon	West: secondary containment unit approximately 580 gallons. and North: secondary containment unit capacity approximately 310 gallons.
53-1180 (WMC RAD Storage Area north of Bldg 3, Sector A)	Catastrophic	330	North to Los Alamos Canyon	Prefab secondary containment building with capacity of 227 gallons.
Behind Building 53-0315	Catastrophic	55	southwest to storm drain to Los Alamos Canyon	Steel containment pallet approx 350 gal capacity
Bldg 53-0018 outdoors	Catastrophic	55	south to storm drain to Sandia Canyon	Containment pallets approx 67 gal capacity containment structure with capacity of 665 gallons
Bldg 53-0028 rm 200	Catastrophic	55	sanitary sewer	steel containment unit 120 gal capacity
Outside off of La Mesita and N of LEDA –(MPF 365 RF Pad / LEDA)	Catastrophic	55	West to tributary of Sandia Canyon	parking lot west of transformers: Covered secondary pallets approx 65 gal capacity transformers area: drainage catchment basin 1683 gallon capacity
Oil filled Operational Equipment				
Transformers and experimental equipment- north	Catastrophic	Depends on unit, Max 2000 gal	north to Los Alamos Canyon	regular inspection and oil spill contingency plan. Some units have secondary containment as described in

				table in Appendix E.
Transformers and experimental equipment- south	Catastrophic	Depends on unit, Max 2500 gal	South and west to Sandia Canyon	regular inspection and oil spill contingency plan. Some units have secondary containment, see table in Appendix E.
Product transfer areas				
Drum to indoor equipment	Spills	5	unlikely to leave building	Indoors and spill control kit
portable container movements Building 53-0002 (MPF- 2) outdoors	catastrophic	55 gallons (future 350 gal)	west to Sandia Canyon	spill control kit
53-1180 (WMC RAD Storage Area north of Bldg 3, Sector A)	spill	55 gallons	north to Los Alamos Canyon	spill control kit
portable container movements Behind Building 53-0315	catastrophic	55 gallons	Storm drain to Los Alamos Canyon	spill control kit, future utilize: temporary inlet cover at storm drain
portable container movements Bldg 53-0018 outdoors	catastrophic	55 gallons	Storm drain to Sandia Canyon	spill control kit, future utilize: temporary inlet cover at storm drain
portable container movements Bldg 53-0028 rm 200	catastrophic	55 gallons	Storm drain to Sandia Canyon	spill control kit
portable container movement Outside off of La Mesitia and N of LEDA –(MPF 365 RF Pad / LEDA)	catastrophic	55 gallons	Storm drain to Sandia Canyon	spill control kit

Note: potential transfers during maintenance of outdoor transformers will be covered under maintenance contractor SPCC or plan will be updated.



Containment trench at 2500 gallon transformers

3.2 Spill Prevention

Spill prevention includes training employees on appropriate spill prevention and work procedures and performing inspections and maintenance activities to minimize the potential for equipment failure. Oil filled equipment, portable containers, and secondary containment units should be kept in good working order, including: periodic painting to provide corrosion control, oil seepage will be wiped off during maintenance operations, leaks and seepage will be controlled through repairs and maintenance. Due to the danger of working around energized equipment, maintenance can only be performed while the equipment is de-energized. If leaking equipment cannot be maintained immediately, it will have spill containment installed and contaminated storm water will be properly disposed of.

Movement of oil filled containers or transfers of oil will not occur during precipitation events. Work is also to be performed using LANL's five step Integrated Safety Management approach, which evaluates a task and identifies potential hazards such as a spill event. The steps delineated in section 2.4, Transfer Operations, will be followed even if an IWD is not prepared.

3.3 Oil Spill Contingency Plan

An oil spill contingency plan will be used in lieu of secondary containment for oil filled equipment. There have been no spills in excess of 1,000 gallons or two combined spills greater than 42 gallons in 12 months at this facility. This facility meets the spill history criteria and there are procedures for early detection and timely notification of an oil discharge in place.

Portable container oil storage does not fall under the secondary containment exclusion for oil filled equipment and is required to have secondary containment.

An oil spill contingency plan is a detailed oil spill response and removal plan that addresses controlling, containing, and recovering an oil discharge in quantities that may be harmful to navigable waters or adjoining shorelines. LANL's sitewide contingency plan is available at <http://rcra-permitapps.lanl.gov/General-Appendix%20E.pdf>. A copy is included in appendix G. Facility specific procedures are described below.

Definition of the authorities, responsibilities, and duties of all entities involved in oil removal operations:

Authorities	Contact Responsibilities	Response Duties
Onsite workers	Notify <u>LANSCE On-call Duty Officer at 664-7466</u> and <u>contact EM&R at 7-6211 (non-emergencies) or 911 (emergencies)</u> if necessary.	If the spill is small and you know how to clean it up, you may do so if it is safe. Otherwise, EM&R

		will respond.
ENV Generalist	Notify ENV-RCRA, document spill in SPCC Plan in accordance with Section 1.3.2	Contact the appropriate Waste Generator and Waste Management Coordinator for disposal.
EM&R	If EM&R is notified of a spill event, they will contact all additional applicable parties including ENV-RCRA	Respond per contingency plan
ENV-RCRA Water Quality	Completion of spill reports that are reportable to federal and state agencies. Provide oversight for spill mitigation activities.	Provide information to federal and state agencies.

Procedures for inspection or early detection and timely notification of an oil discharge:

Oil filled equipment will be inspected monthly for leaks. If electrical equipment has a critical failure, the power will go out and the operators will determine the location and provide spill response in a timely manner. Notifications will occur as in the table above.

Assurance that full resource capability is known and can be committed following a discharge;
EM&R (Emergency Management & Response) is a 24 hour fully trained and equipped team located onsite at LANL at TA-69. They maintain a mobile trailer capable of responding to an oil spill.

Actions for after discovery and notification of a discharge; Procedures to facilitate recovery of damages and enforcement measures.
LANLs EM&R team will respond to and clean up a spill per the LANL contingency plan available at <http://rcra-permitapps.lanl.gov/General-Appendix%20E.pdf>. A copy is included in appendix G, but the online version should be referred to for the current version.

Disposal occurs by the Waste Management Coordinator (WMC) per LANL Procedure P409 Waste Management <http://policy.lanl.gov/pods/policies.nsf/MainFrameset?ReadForm&DocNum=P409&FileName=P409.pdf>. Oil stained soils are disposed of as NM special waste, plastic and spill absorbents are disposed of as used oil by the WMC.

ENV-RCRA will complete required state, federal, and DOE Order 231.1A ORPS reporting requirements, including the federal reporting of spills in excess of 1,000 gallons or two combined spills greater than 42 gallons in 12 months in accordance with Laboratory and DOE policies and federal and state regulatory reporting requirements per ISD 322-3 Manual for Communication, Investigation, and Reporting Abnormal Events

<http://policy.lanl.gov/pods/policies.nsf/MainFrameset?ReadForm&DocNum=ISD322-3&FileName=ISD322-3.pdf>

In the event of any spill exceeding five gallons, the following LANSCE facility personnel will be notified by the LANSCE On-Call Duty Officer:

Name	Title	Work Phone	Pager	Home	Cell
Daniel Seely	Facility Operations Director	665-2584	104-1805	577-2017	577-2017
John Graham	Environment, Health, Safety and Quality Manager	665-4666	104-1686	4663690	699-0842
Patricia Vardaro-Charles	LANSCE Environmental Lead	665-4644	664-2479	662-0953	670-1863
Duane Nizio	MSS-LFO Group Leader	667-7715			699-3827
Duty Officer	Duty Officer		664-7466		

4.0 OTHER CONSIDERATIONS

4.1 History

This document is an initial issue.

4.2 Appendices

Appendix A—Certification of the Applicability of the Substantial Harm Criteria

Appendix B—Annual Inspection Reports

Appendix C—SPCC Equipment TA-53 Inventory

Appendix D—TA-53 BMP Locations

Appendix E—TA-53 Overall Site Layout

Appendix G—Contingency Plan

Appendix A

Certification of the Applicability of the Substantial Harm Criteria

CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA

Facility Name: TA-53 LANSCE

Facility Address: LANSCE, TA-53, LANL, Los Alamos, NM

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes No

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

Yes No

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in accordance with EPA 40 CFR 112, App. C) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" and the applicable Area Contingency Plan.

Yes No

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in accordance with EPA 40 CFR 112, App. C) such that a discharge from the facility would shut down a public drinking water intake 2?

Yes No

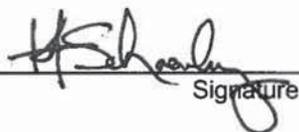
4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a re-portable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes No

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Kurt Schoenberg
Name (please type or print)


Signature

LANSCE User Facility Director
Title

6/29/09

Date

Aboveground Storage Tank (AST) Annual Inspection for TA-53 LANSCE, February 14, 2008

Present:

Patricia Vardaro-Charles (LANSCE Environmental Representative, ENV-RCRA) and Mark Haagenstad (ENV-RCRA)

Summary:

Spill Prevention Control and Countermeasure (SPCC) Plan:

SPCC Plan needs to be updated to incorporate new and existing regulatory requirements. SPCC Plan has not been updated to include existing oil storage at the facility. Inspections were not being conducted pursuant to the current SPCC Plan. Facility personnel are not completing training requirements.

Tanks:

TA-53-645 AST is in the process of being closed-out. 3-4 inches of oil still remains in the AST. Poly tanks in building TA-53-18 need to be replaced or removed. The facility is in the process of removing the oil in the poly tanks. Drum/poly container storage practices should be improved and included in the SPCC Plan.

Compliance Issues

The following issues are not in compliance with 40 CFR 112 of the Oil Pollution Prevention Regulations or the most current version of the SPCC Plan. These issues must be addressed as soon as possible. A Corrective Actions Plan (CAP) must be completed and submitted to ENV-RCRA for approval no later than May 15, 2008. The CAP must outline proposed corrective actions for each issue. Proposed completion dates for each issue must also be included in the CAP.

Compliance Issues	Required Improvements
1. The 7,500 gallons of oil stored in the TA-53-645 AST has been drained within 3-4 inches of the bottom of the AST. The AST must be closed-out to meet regulatory requirements for EPA SPCC (40 CFR 112) and 20.5 NMAR of the New Mexico Environment Department Petroleum Storage Tank Bureau (NMED-PSTB) Regulations.	Contact ENV-RCRA's Mark Haagenstad (665-2014) for information on closure requirements. Complete as soon as possible.
2. The poly tanks in building TA-53-18 are seeping mineral oil and should be removed or replaced (Photo 1). Facility is in the process of draining the tanks.	Drain oil in poly tanks. Closeout poly tanks. Complete as soon as possible.
3. Additional poly storage containers were identified behind building TA-53-18 and should be added to the SPCC Plan and consolidated to a designated storage area (Photo 2). Many capacitors (single volume less than 55 gallons) were identified near TA-53-18.	Remove tanks or add tanks to SPCC Plan. Verify secondary containment can contain 110% of the single largest container volume capacity. Ensure capacitors have adequate BMPs to prevent potential releases to the environment. Complete as soon as possible.
4. Drum pallets were located in a nonspecified storage area near the canyon edge. Drums are not included in the existing SPCC Plan.	Remove drums or add drums to SPCC Plan. Complete as soon as possible.
5. Building TA-58-2 drum storage silicone at secondary containment outlet and drain is damaged and peeling (Photo 3).	Clean, inspect, and repair secondary containment. Complete as soon as possible.
6. Building TA-53-2 mobile tank secondary containment paint is failing. Mobile tank should be evaluated for Department of Transportation (DOT) standards and requirements.	Clean, inspect, and repair secondary containment. Evaluate mobile tank to ensure it meets DOT standards and requirements. Complete as soon as possible.

Compliance Issues	Required Improvements
7. Monthly inspections were not being completed pursuant to the existing SPCC Plan.	Complete monthly inspections pursuant to existing SPCC Plan. Complete as soon as possible.
8. There was no documentation that all oil handling personnel and SPCC Inspectors are completing training requirements pursuant to 40 CFR 112.	Ensure all oil handling personnel and SPCC Inspectors are meeting training requirements pursuant to 40 CFR 112. Personnel must take Laboratory online annual SPCC Training Class/Module (Course #: 30441). Additionally, SPCC Inspectors and oil handling personnel must review SPCC Plan annually. Complete as soon as possible.
9. The facility has not updated the existing SPCC Plan to include all oil storage containers with a storage capacity greater than or equal to 55 gallons that exist in SPCC designated areas.	The facility must update existing SPCC Plan to include aggregate storage areas, including containers with 55 gallon capacity or greater. Complete as soon as possible.

Observations:

The following observations will need to be completed/implemented prior to July 1, 2009:

Observation	Required Improvements
1. The TA-53 Beam Line building was not visited, however, oil filled equipment needs to be added to SPCC Plan to meet new regulatory requirements. Transformers were identified outside throughout TA-53 facility. Some appear to be weeping oil (Photo 4).	Conduct a facility wide survey to identify all oil holding equipment at the facility with a storage capacity of 55 gallons capacity or greater. Amend SPCC Plan and implement BMPs if necessary to include oil storing equipment. Complete prior to July 1, 2009.
2. The SPCC Plan has not been updated to include new regulatory requirements pursuant to 40 CFR 112.	Update SPCC Plan to meet new regulatory requirements. Complete prior to July 1, 2009.
3. Storage drums located near canyon edge.	Relocate drums away from canyon edge and nearby storm water drainages.

Items will be updated in Laboratory Issues Management Tracking System (LIMITS).



Photo 1: Leaking oil in building TA-53-18



Photo 2: Poly tanks in non-designated area.



Photo 3: Damaged secondary containment outlet.



Photo 4: Weeping transformer, storm water is not contained.



memorandum

*Environmental Protection Division
Water Quality & RCRA Group (ENV-RCRA)*

To/MS: Distribution
Thru/MS: Anthony R. Grieggs, ENV-RCRA, K490 *JMS*
From/MS: Mark Haagenstad, ENV-RCRA, K490 *OPA*
Phone/Fax: 5-2014/5-9344
Symbol: ENV-RCRA-09-088
Date: June 1, 2009

**SUBJECT: ANNUAL INSPECTION OF ABOVEGROUND STORAGE TANK (AST)
SYSTEMS AT TA-53 LANSCE**

On January 28, 2009, February 2, 2009, and May 4, 2009, representatives from ENV-RCRA met with TA-53 LANSCE facility representatives to conduct the annual inspection of aboveground storage containment (ASC) systems at TA-53 LANSCE that use or store oil. ASC compliance inspections are provided by Laboratory Water Quality and RCRA Group (ENV-RCRA) personnel to help ASC owners and operators meet new and existing regulatory requirements pursuant to 40 CFR 112 of the Oil Pollution Prevention Regulations and the facility-specific Spill Prevention, Control, and Countermeasure (SPCC) Plan.

Attached for your review is the Annual Inspection Report. ENV-RCRA recommends that issues identified in the inspection report be addressed as soon as possible to meet new and existing requirements pursuant to 40 CFR 112. Please complete these deficiencies prior to July 1, 2009 or provide documentation for proposed corrective actions. Have appropriate authorities sign the attached inspection report and place a copy in the most current SPCC Plan.

ENV-RCRA can provide regulatory guidance in addressing issues identified in the inspection report. Additionally, ENV-RCRA is in the process of updating the SPCC Plan for new requirements. Contact me at 665-2014 if you have any questions or require additional information. Thank you for your help in meeting these requirements.

ARG:MH/lm

Attachments: a/s

Distribution

Kurt Schoenberg, ADEPS, w/att., H845
Kevin Jones, AOT-DO, w/att., H809
Daniel Seely, LFO-DO, w/att., H814
John Graham, ADESHQ, w/att., H814
Francis Turner, LFO-DO, w/att., H814
Patricia Vardaro-Charles, ENV-EAQ, w/att., H814

Cy: Dianne Wilburn, ENV-EAQ, w/att., J978
Mike Saladen, ENV-RCRA, w/att., K490
Jennifer Foote, ENV-RCRA, w/att., K490
ENV-DO, File, w/o att., J978
ENV-RCRA File, w/att., K490



POWER SERVICES DIVISION



DAILY TIME SHEET

Customer Los Alamos National Laboratory	Contact Karen Young	Job No. 29107	Date 3.9.09
City / State Los Alamos, N.M.	Sub Station	P.O. No.	Technician GARY REICH

Job Evaluation / Scope						
Equipment	Quantity	Pressure	Temp	Service	Leak	Repair
XFRR008	2	Head	AMB	OLL		4 Bolt Flgs. Completed
	2	"	"	"		Value packings Completed
XFRR007	8	"	"	"		4 Bolt Flgs. Completed
	7	"	"	"		Value packings Completed

Comments

TIME			OFFICE USE		TOTALS		OFFICE USE	
Type	Arrive/Depart	Hours	Type	Total	Quantity	Item	Cost Per	Total
T.T.	0715 0730	.25			2	Sealant Kits		
Plant	0730 1730	10.0			39	1/16" pipe plugs		
T.T.	1730 1745	.25			1	Degreaser		
					1	Consumable		
					10	4-Bolt Flgs.		
					9	Value packings		
					1	Mob and De-Mob		

Notes

Customer Signature *Karen Young*

Office Use Only	
Lump Sum Total	
Hotel	1
Per Diem	1
Other	
Other	
Other	
Daily Total	



POWER SERVICES DIVISION



DAILY TIME SHEET

Customer L.A. National Laboratory	Contact Karen Young	Job No. 29107	Date 3.10.09
City / State Los Alamos, N.M.	Sub Station	P.O. No.	Technician Gary Reich

Job Evaluation / Scope						
Equipment	Quantity	Pressure	Temp	Service	Leak	Repair
XFERRODS	8	Head	AMB	oil		4 Bolt Flgs. Completed
	6	"	"	"		1/2 Valve Packings Completed

Comments

TIME			OFFICE USE		TOTALS		OFFICE USE	
Type	Arrive/Depart	Hours	Type	Total	Quantity	Item	Cost Per	Total
T.T.	0715 0730	.25			2	Sealant Kits		
Plant	0730 1700	9.50			30	1/2 Pipe plugs		
T.T.	1700 1715	.25			1	Consumable		
					1	Degreasers		
					8	4-Bolt Flgs		
					6	1/2 Valve packings		

Notes

Customer Signature *Karen Young*

Office Use Only	
Lump Sum Total	
Hotel	1
Per Diem	1
Other	
Other	
Other	
Daily Total	



POWER SERVICES DIVISION



DAILY TIME SHEET

Customer Los Alamos NAT. Lab.	Contact Karen Young	Job No. 29107	Date 3.11.09
City / State Los Alamos, N.M.	Sub Station	P.O. No.	Technician Gary Reich

Job Evaluation / Scope						
Equipment	Quantity	Pressure	Temp	Service	Leak	Repair
XFRR004	4	Head	AMB	OLL		4 Bolt Flgs. Completed
	3	"	"	"		1/2 Valve packings Completed
XFRR003	3	"	"	"		4 Bolt Flgs. Completed
	2	"	"	"		Valve packings Completed
XFRR006	2	"	"	"		4 Bolt Flgs. Completed
	2	"	"	"		Valve packings Completed

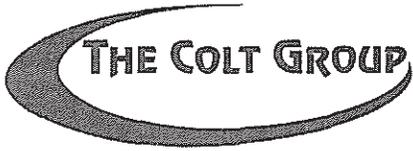
Comments

TIME			OFFICE USE		TOTALS		OFFICE USE	
Type	Arrive/Depart	Hours	Type	Total	Quantity	Item	Cost Per	Total
T.T.	0715 0730	.25			2	Sealant Kits		
Plant	0726 1645	9.25			34	1/2" pipe plugs		
T.T.	1645 1700	.25			1	Consumable		
					1	Deareaser		
					9	4 Bolt Flgs.		
					7	Valve packings		

Notes

Customer Signature: *Karen Young*

Office Use Only	
Lump Sum Total	
Hotel	1
Per Diem	1
Other	
Other	
Other	
Daily Total	



POWER SERVICES DIVISION



DAILY TIME SHEET

Customer Los Alamos National Laboratory	Contact Karen Young	Job No. 29107	Date 3.12.09
City / State Los Alamos, N.M.	Sub Station	P.O. No.	Technician BARRY REICH

Job Evaluation / Scope						
Equipment	Quantity	Pressure	Temp	Service	Leak	Repair
XFERRO3	4	Head	AMB	OIL		Drain plugs Completed
201 H.V. yard #1	1	"	"	"		Bar Clamp Completed
#2 H.V. yard TA 1169	1	"	"	"		Bar Clamp Completed
XFERD 218	1	"	"	"		Epoxy Bonded Resin Completed
RV003	1	"	"	"		Epoxy Repair Completed
RV004	1	"	"	"		Epoxy Repair Completed

Comments

TIME			OFFICE USE		TOTALS		OFFICE USE	
Type	Arrive/Depart	Hours	Type	Total	Quantity	Item	Cost Per	Total
T.T.	0715 0730	.25			1	Sealant Kit		
Plant	0730 1745	10.25			8	1/4" pipe plugs		
TT	1745 1800	.25			1	Deaerases		
					1	Consumable		
					2	Custom Bar Clamps		
					3	Epoxy Bonded Resin		
					4	1.350 Drain Caps		

Notes

Customer Signature: *Karen Young*

Office Use Only	
Lump Sum Total	
Hotel	
Per Diem	
Other	
Other	
Other	
Daily Total	



POWER SERVICES DIVISION



DAILY TIME SHEET

Customer Los Alamos NAT Lab	Contact Karen Young	Job No. 29107 A	Date 3.16.09
City / State Los Alamos, NM	Sub Station	P.O. No.	Technician GARY REICH

Job Evaluation / Scope						
Equipment	Quantity	Pressure	Temp	Service	Leak	Repair
XFRR003	3	Head	AMB	OIL		Drain plugs Completed
XFRR004	1	"	"	"		Drain plug Completed
	1	"	"	"		4-Bolt Flg. Completed
	1	"	"	"		Value packing Completed
XFRR005	7	"	"	"		4-Bolt Flgs. Completed
	7	"	"	"		Value packing Completed

Comments

TIME			OFFICE USE		TOTALS		OFFICE USE	
Type	Arrive/Depart	Hours	Type	Total	Quantity	Item	Cost Per	Total
T.T.	0715 0730	.25			3	Sealant Kits		
Plant	0730 1730	10.0			36	1/16" pipe plugs		
T.T.	1730 1745	.25			1	Consumable		
					1	Deasaser		
					4	1.350 Drain Caps		
					8	4 Bolt Flgs.		
					8	Value packings		

Notes

Office Use Only	
Lump Sum Total	
Hotel	1
Per Diem	1
Other	
Other	
Other	

Customer Signature *Karen Young*

Daily Total



POWER SERVICES DIVISION



DAILY TIME SHEET

Customer Los Alamos NAT Lab	Contact Karen Young	Job No. 29107A	Date 3.17.09
City / State Los Alamos, N.M.	Sub Station	P.O. No.	Technician GARY REICH

Job Evaluation / Scope						
Equipment	Quantity	Pressure	Temp	Service	Leak	Repair
XFRR003	2	Head	AMB	oil		4 Bolt Flgs. Completed
	2	"	"	"		Value packings Completed
	2	"	"	"		Drain plugs Completed
XFRR007	1	"	"	"		4 Bolt Flgs. Completed
	2	"	"	"		Value packings Completed
	4	"	"	"		Drain plugs Completed
	2	"	"	"	(no warranty)	Epoxy repairs Completed

Comments

TIME			OFFICE USE		TOTALS		OFFICE USE	
Type	Arrive/ Depart	Hours	Type	Total	Quantity	Item	Cost Per	Total
T.T.	0715 0730	.25			2	Sealant Kits		
Plant	0730 1645	9.25			19	1/16" pipe plugs		
T.T.	1645 1700	.25			1	Consumable		
					1	Degreaser		
					6	1.350 Drain Caps		
					3	4-Bolt Flgs		
					4	Value packings		
					2	Epoxy Repairs		

Notes

Office Use Only	
Lump Sum Total	
Hotel	
Per Diem	
Other	
Other	
Other	

Customer Signature *Kan Young*

Daily Total



POWER SERVICES DIVISION



DAILY TIME SHEET

Customer Los Alamos NAT. Lab	Contact Karon Young	Job No. 29107 A	Date 3.18.09
City / State Los Alamos, N.M.	Sub Station	P.O. No.	Technician DARY REICH

Job Evaluation / Scope						
Equipment	Quantity	Pressure	Temp	Service	Leak	Repair
SPARE TRANS	7	Head	AMB	Oil		Drain Plugs Completed
H836600	3	"	"	"		4-Bolt Flgs Completed
	1	"	"	"		Valve Packings Completed
TA-5349	4	"	"	"	No warranty	Epoxy Repair Completed
RV-004	2	"	"	"	No warranty	Epoxy Repair Completed
XFRRO12	4	"	"	"	No warranty	Epoxy Repair Completed

Comments

TIME			OFFICE USE		TOTALS		OFFICE USE	
Type	Arrive/Depart	Hours	Type	Total	Quantity	Item	Cost Per	Total
T.T	0715 0730	.25			2	Sealant Kits		
Plant	0730 1730	10.0			17	1/2" pipe plugs		
T.T	1730 1745	.25			1	Consumable		
					1	Degreaser		
					1	VALVE PACK		
					3	4 Bolt Flgs		
					7	1.350 Drain Caps		
					10	Epoxy Repairs		

Notes

Customer Signature *Karon Young*

Office Use Only	
Lump Sum Total	
Hotel	1
Per Diem	1
Other	
Other	
Other	
Daily Total	



POWER SERVICES DIVISION



DAILY TIME SHEET

Customer Los Alamos Nat. Lab.	Contact Karen Young	Job No. 39107A	Date 3.19.09
City / State Los Alamos, N.M.	Sub Station	P.O. No.	Technician GARY REICH

Job Evaluation / Scope						
Equipment	Quantity	Pressure	Temp	Service	Leak	Repair
XFRR 005	4	Head	AMB	oil		Drainplugs Completed
XFRR 006	4	"	"	"		Drainplugs Completed
XFRR 007	2	"	"	"		Drainplugs Completed
XFRR 009	1	"	"	"		Drainplug Completed

Comments

TIME			OFFICE USE		TOTALS		OFFICE USE	
Type	Arrive/ Depart	Hours	Type	Total	Quantity	Item	Cost Per	Total
T.T.	0715 0730	.25			2	Sealant kits		
Plant	0730 1630	9.0			11	1/16" pipe plugs		
T.T.	1630 1645	.25			1	Consumable		
					1	Degreaser		
					11	1.650 Drain caps		

Notes

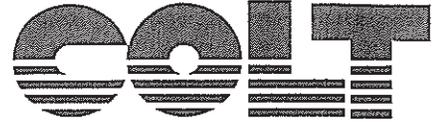
Office Use Only	
Lump Sum Total	
Hotel	
Per Diem	
Other	
Other	
Other	

Customer Signature *Ka Young*

Daily Total



POWER SERVICES DIVISION



DAILY TIME SHEET

Customer <i>Los Alamos NAT. Lab</i>	Contact <i>Karen Young</i>	Job No. <i>29107A</i>	Date <i>3.20.09</i>
City / State <i>Los Alamos, N.M.</i>	Sub Station	P.O. No.	Technician <i>SARY REICH</i>

Job Evaluation / Scope							
Equipment	Quantity	Pressure	Temp	Service	Leak	Repair	
<i>XFRR006</i>	<i>1</i>	<i>High</i>	<i>AAA</i>	<i>oil</i>		<i>4-Bolt Flg.</i>	<i>Completed</i>
	<i>1</i>	<i>"</i>	<i>"</i>	<i>"</i>		<i>VALVE PACK</i>	<i>Completed</i>
	<i>1</i>	<i>"</i>	<i>"</i>	<i>"</i>		<i>Drain plug</i>	<i>Completed</i>
<i>XFRR005</i>	<i>2</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>No Warrant</i>	<i>Epoxy Repair</i>	<i>Completed</i>
<i>XFRR007</i>	<i>1</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>No Warrant</i>	<i>Epoxy Repair</i>	<i>Completed</i>
<i>XFRR008</i>	<i>1</i>	<i>"</i>	<i>"</i>	<i>"</i>		<i>4-Bolt Flg.</i>	<i>Completed</i>
	<i>1</i>	<i>"</i>	<i>"</i>	<i>"</i>		<i>Drain plug</i>	<i>Completed</i>

Comments

TIME			OFFICE USE		TOTALS		OFFICE USE	
Type	Arrive/Depart	Hours	Type	Total	Quantity	Item	Cost Per	Total
<i>T.T</i>	<i>0715</i> <i>0730</i>	<i>.25</i>			<i>1</i>	<i>Sealant Kit</i>		
<i>Plant</i>	<i>0730</i> <i>1645</i>	<i>9.25</i>			<i>7</i>	<i>1/2" pipe plug</i>		
<i>T.T</i>	<i>1645</i> <i>1700</i>	<i>.25</i>			<i>1</i>	<i>Consumable</i>		
					<i>1</i>	<i>Deaerater</i>		
					<i>2</i>	<i>1.350 Drain Cap</i>		
					<i>2</i>	<i>4 Bolt Flgs</i>		
					<i>1</i>	<i>VALVE PACK</i>		
					<i>3</i>	<i>Epoxy Repairs</i>		

Notes

Customer Signature *[Signature]*

Office Use Only	
Lump Sum Total	
Hotel	
Per Diem	
Other	
Other	
Other	
Daily Total	

ANNUAL SPCC WALK-AROUND INSPECTION FORM TA-53 LANSCE FACILITY

Visual walk-around inspections are conducted annually by ENV-RCRA. Equipment is inspected for spill potential and will not be taken out of service.

Inspection Date: 1/28/2009, 2/2/2009, and 5/4/2009 Inspectors: Jennifer Foote and Mark Haagenstad

Others Present: Patricia Vardaro-Charles

Last SPCC review date: Revision in process - Last revision approved August 2004.

Any changes to facility that impact ability to discharge oil? (new or removed tanks/drums, changes to procedures): SPCC Plan (Plan) is in the process of being updated. All bulk storage tanks were closed pursuant to 40 CFR 112 or SPCC Rule requirements and 20.5 NMAC of the New Mexico Environment Department Petroleum Storage Tank Bureau (NMED-PSTB) Regulations. Portable container storage areas and equipment are the only oil storage remaining at the facility. Drum storage is no longer occurring outside Sector J. Oil filled equipment is being added to the Plan. Amendment to the Plan will include procedures for drainage of secondary containment and movement of portable containers. Note: This inspection form is the new inspection format.

Item:	Acceptable	Unacceptable
SPCC Records maintained? - Monthly inspections are kept as hard copies and saved online. Training records are available online and are in progress of being completed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spill Control equipment. - Facility has portable spill kits. Additional spill kits have been ordered and will be installed for each area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments: Corrective Action Plan (CAP) items are in the process of being completed.

PORTABLE CONTAINER STORAGE AREAS

Area or Building #: <u>Building 2 outdoors - North and West</u>	Acceptable	Unacceptable
Spill Control equipment	<input checked="" type="checkbox"/> spill kit in building	<input type="checkbox"/>
Housekeeping	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of containers and containments (dents, bulging, leaks, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (expansion of drum area, changes to procedures):

Other comments: Portable cubes are on-site but not yet in use. Units will need to be stored on metal secondary containment units because concrete curb secondary capacity is too small.

Area or Building #: <u>Building 1180</u>	Acceptable	Unacceptable
Spill Control equipment	<input checked="" type="checkbox"/> kit on site.	<input type="checkbox"/>
Housekeeping	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of drums and containments (dents, bulging, leaks, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (expansion of drum area, changes to procedures): Area will be added to Plan. Discussed moving structure to other side of asphalt area to provide opportunity to control and clean up a spill from transfer operations before it discharges from the site. Final method of transfer BMPs needs to be discussed and implemented. A spill kit is on-site but current transfer

operations are too close to canyon edge to respond to without relocation of the building or installation of temporary or permanent berms.

Other comments: Containment building measured as 5'-11"x10'-4"x6" (227 gallon capacity) with two 330 gallon poly tanks. Containment capacity must be larger than the tank capacity so the tanks must be replaced with tanks 227 gallons or less capacity. Poly tank manufacturer stated that typically containers are used for two years, these are dated 2004 but appear to still be in good condition.

Area or Building #: <u>Building 28 Room 200</u>	Acceptable	Unacceptable
Spill Control equipment – using drip pads for operations	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Housekeeping	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of drums and containments (dents, bulging, leaks, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (expansion of drum area, changes to procedures): Need to add area to Plan – one pallet indoors with two 55 gallon drums and other items– floor drain goes to sanitary sewer, recommend re-plug drains (described as plugged in WSC report).

Other comments: _____



Bldg. 28 drum storage

Area or Building #: <u>Building 18 West</u>	Acceptable	Unacceptable
Spill Control equipment	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Housekeeping	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area drainage – pallets are stored around storm drain, use drain cover when moving drums.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of drums and containments (dents, bulging, leaks, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (expansion of drum area, changes to procedures): Need to add BMPs to use drain cover when moving drums.

Other comments: Need a spill kit at the area.

Area or Building #: <u>Building 18 North</u>	Acceptable	Unacceptable
Spill Control equipment	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Housekeeping	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of drums and containments (dents, bulging, leaks, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (expansion of drum area, changes to procedures): Need to add area to Plan, containers (2 - 330 gallons, 2 - 550 gallons [will add one more 550 from 53-002], 1- 350 gallons, 1 drum) are stored on metal secondary containment (8'-9"x8"x15'-3").

Other comments: Need a spill kit at the area.

Area or Building #: <u>Behind Building 3 Sector M or Area A or 53-0315</u>	Acceptable	Unacceptable
Spill Control equipment	<input type="checkbox"/>	<input checked="" type="checkbox"/> need a spill kit at the area when oil transfers occur.
Housekeeping	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of drums and containments (dents, bulging, leaks, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (expansion of drum area, changes to procedures): Add area to Plan.

Other comments: Secondary containment approximately 9'-4"x5'-1"x1' tarp cover is damaged. Need to ensure that cover allows for monthly inspection access.

Area or Building #: <u>LEDA outside</u>	Acceptable	Unacceptable
Spill Control equipment	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Housekeeping	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of drums and containments (dents, bulging, leaks, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (expansion of drum area, changes to procedures): Need to add transformer area to Plan (3 drums and IBC), pallets in parking area already covered.

Other comments: Need a spill kit at the area.

OIL FILLED EQUIPMENT

Areas inspected: 53-002 Indoors

List oil filled equipment inspected (attach checklist of items inspected if needed): 5 modulator tanks

List any equipment not inspected and why: _____



TA-53-002 modular tank

Item:	Acceptable	Unacceptable
Spill Control equipment (in specified location, complete kit)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Housekeeping (combustibles, spills, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of equipment (dents, rust, leaks, gage readings out of normal).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (changes to equipment, changes to procedures):
Add to Plan.

Comments: _____

Areas inspected: 53-002 Outdoors

List oil filled equipment inspected (attach checklist of items inspected if needed): Three transformers.

List any equipment not inspected and why: _____



TA-53-002 outdoor transformers

Item:	Acceptable	Unacceptable
Spill Control equipment (in specified location, complete kit)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Housekeeping (combustibles, spills, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area drainage	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Condition of equipment (dents, rust, leaks, gage readings out of normal).	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (changes to equipment, changes to procedures):
Add to Plan. Patching of transformer was performed in May 2009, however facility still needs to clean up leaks and install containment sufficient to contain a spill long enough to clean up before reaching a drainage. Records of maintenance performed needs to be submitted.

Comments: Installation of an earthen berm or oil containment dikes were discussed.

Areas inspected: 53-003 Indoors, Sector B-H, J, and Sector B cage.

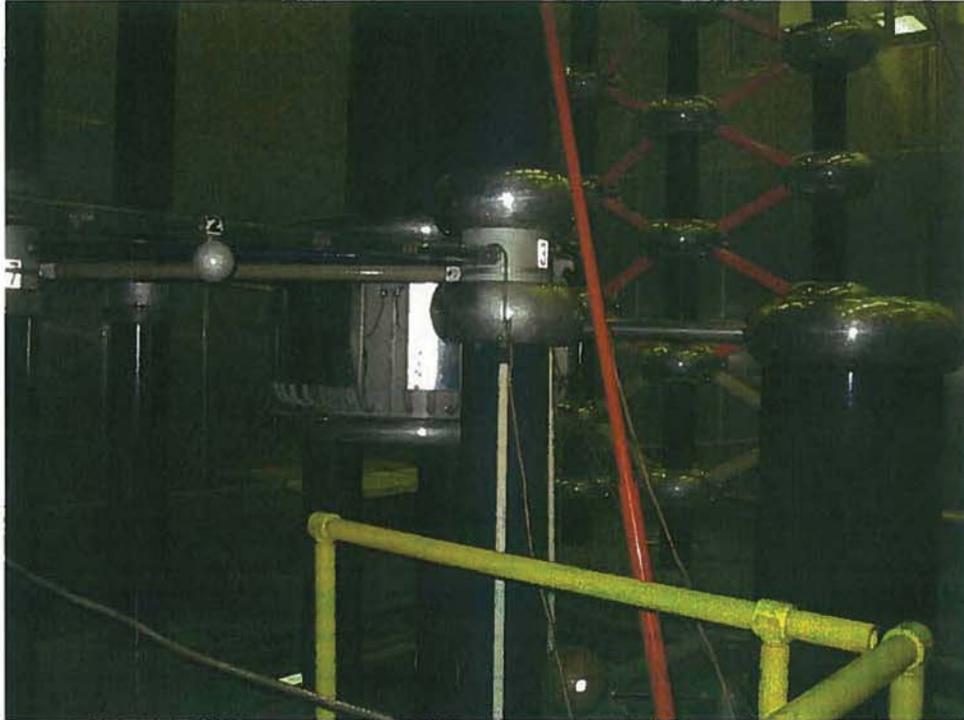
List oil filled equipment inspected (attach checklist of items inspected if needed): Modulator tanks located in Sector B, Sector B cage, and Sector J equipment.

List any equipment not inspected and why: Modulator tanks in Sector C-H, identical to Sector B.

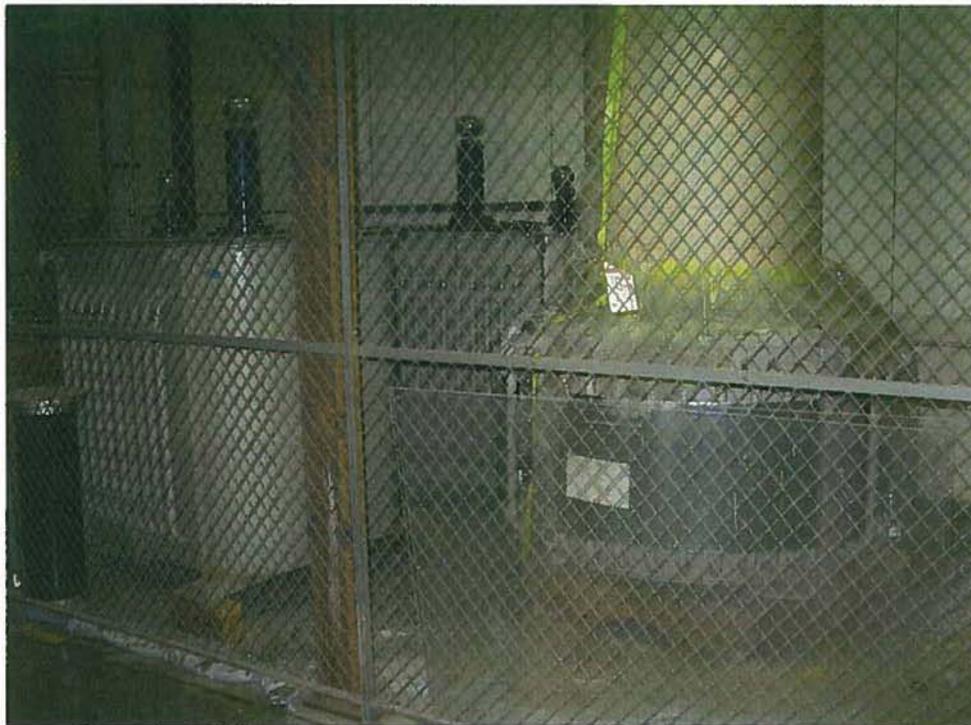
Item:	Acceptable	Unacceptable
Spill Control equipment (in specified location, complete kit)	<input type="checkbox"/>	<input checked="" type="checkbox"/> – need a spill kit at the area
Housekeeping (combustibles, spills, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of equipment (dents, rust, leaks, gage readings out of normal).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (changes to equipment, changes to procedures): Need to add to Plan.

Comments: Roll up door at Sector B may be a pathway for oil to escape from building. All other areas have no issues.



Sector J: H+ oil filled equipment



Sector B cage



Typical oil filled equipment in Bldg 2 Sector B-H

Areas inspected: 53-003 Outdoors Sector A-H

List oil filled equipment inspected (attach checklist of items inspected if needed): Sets of transformers.

List any equipment not inspected and why: _____

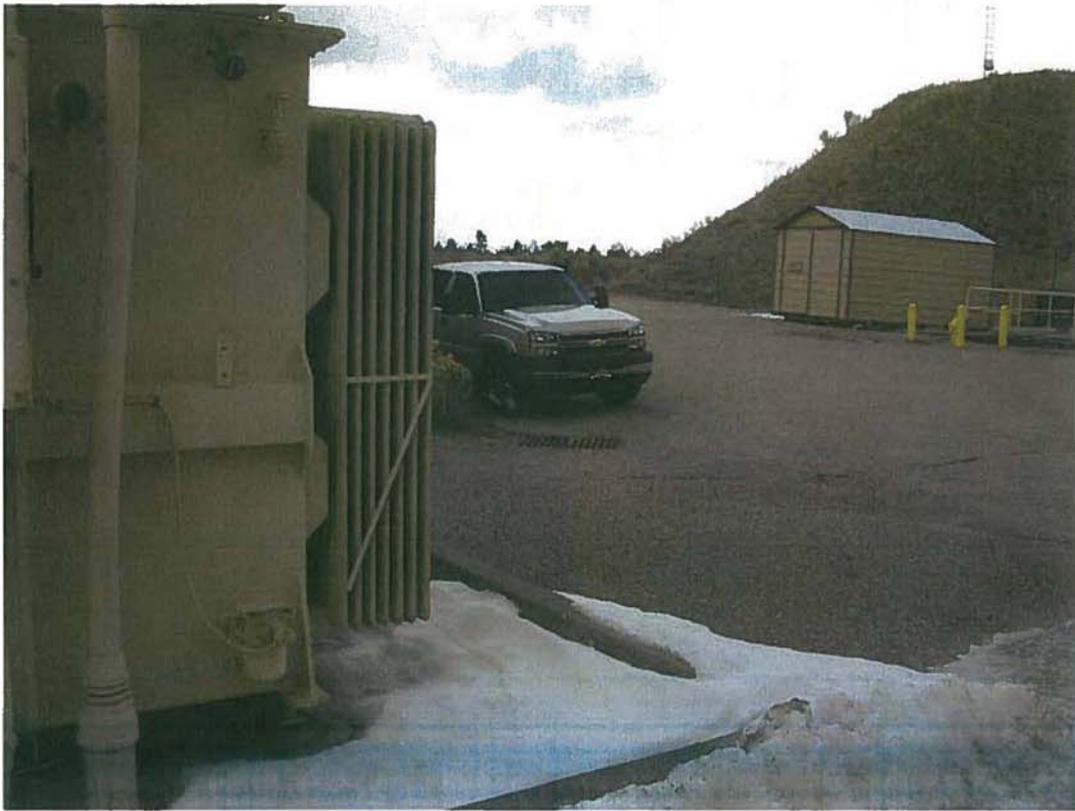
Item:	Acceptable	Unacceptable
Spill Control equipment (in specified location, complete kit)	<input type="checkbox"/>	<input checked="" type="checkbox"/> – need a spill kit at the area
Housekeeping (combustibles, spills, etc)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area drainage	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of equipment (dents, rust, leaks, gage readings out of normal.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (changes to equipment, changes to procedures):
Need to add to Plan.

Comments: Need to install BMP at Sector H uphill of storm drain to contain a spill long enough to clean up before reaching a drainage.



Outdoor transformers at Sector A



Transformer at Sector H and adjacent storm drain

Areas inspected: 53-003 outdoors Sector J

List oil filled equipment inspected (attach checklist of items inspected if needed): Equipment stored on two containment units.

List any equipment not inspected and why: _____

Item:	Acceptable	Unacceptable
Spill Control equipment (in specified location, complete kit)	<input type="checkbox"/>	<input checked="" type="checkbox"/> – need a spill kit at the area
Housekeeping (combustibles, spills, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Condition of equipment (dents, rust, leaks, gage readings out of normal).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (changes to equipment, changes to procedures):
Drums are no longer stored here.

Comments: Secondary containment has accumulated storm water which is causing the unit to rust.

Areas inspected: 53-003 Sector M / Area A

List oil filled equipment inspected (attach checklist of items inspected if needed): 1700 gallons oil filled equipment.

List any equipment not inspected and why: _____

Item:	Acceptable	Unacceptable
Spill Control equipment (in specified location, complete kit)	<input type="checkbox"/>	<input checked="" type="checkbox"/> – need a spill kit at the area
Housekeeping (combustibles, spills, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of equipment (dents, rust, leaks, gage readings out of normal.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (changes to equipment, changes to procedures): Need to add to Plan.

Comments: _____



Oil filled equipment in Area A

Areas inspected: 53-0018 Inside

List oil filled equipment inspected (attach checklist of items inspected if needed): Four items of oil filled equipment.

List any equipment not inspected and why: _____

Item:	Acceptable	Unacceptable
Spill Control equipment (in specified location, complete kit)	<input type="checkbox"/>	<input checked="" type="checkbox"/> – need a spill kit at the area
Housekeeping (combustibles, spills, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of equipment (dents, rust, leaks, gage readings out of normal).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (changes to equipment, changes to procedures):
 Add to Plan

Comments: _____



Oil filled equipment in 53-0018

Areas inspected: 53-0028 Inside

List oil filled equipment inspected (attach checklist of items inspected if needed): Two oil filled equipment.

List any equipment not inspected and why: _____

Item:	Acceptable	Unacceptable
Spill Control equipment (in specified location, complete kit)	<input type="checkbox"/>	<input checked="" type="checkbox"/> – need a spill kit at the area
Housekeeping (combustibles, spills, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of equipment (dents, rust, leaks, gage readings out of normal).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (changes to equipment, changes to procedures):
 Add equipment to Plan.

Comments: _____



Operational use of spill pads at 53-0028

Areas inspected: North of LEDA.

List oil filled equipment inspected (attach checklist of items inspected if needed): 4 big blue transformers, and oil filled spare equipment.

List any equipment not inspected and why: _____

Item:	Acceptable	Unacceptable
Spill Control equipment (in specified location, complete kit)	<input type="checkbox"/>	<input checked="" type="checkbox"/> – need a spill kit at the area
Housekeeping (combustibles, spills, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Security (lighting, fencing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Area drainage	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Condition of equipment (dents, rust, leaks, gage readings out of normal).	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (changes to equipment, changes to procedures): Add transformers area to Plan.

Comments: Secondary containment was measured (56'-3"x2'x2') and found to be only 1683 gallons, most likely transformers were changed after pad design to 4 larger ones since there is space on the pad for two more. Transformers have small leaks. Facility is monitoring and maintaining leaks to ensure mineral oil does not enter storm water. Oil Plugs® are being proposed for installation.



Containment trench at transformers north of LEDA

Areas inspected: 53-0365 Indoors

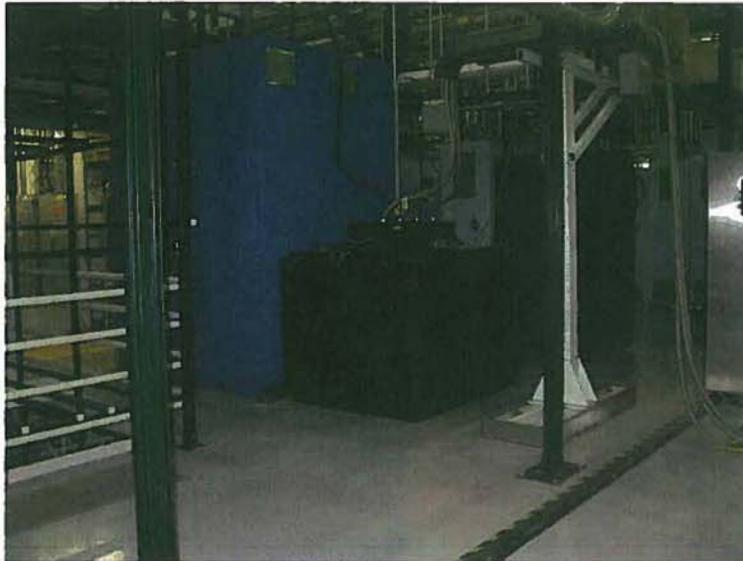
List oil filled equipment inspected (attach checklist of items inspected if needed): 9 oil filled equipment items.

List any equipment not inspected and why: _____

Item:	Acceptable	Unacceptable
Spill Control equipment (in specified location, complete kit)	<input type="checkbox"/>	<input checked="" type="checkbox"/> – need a spill kit at the area
Housekeeping (combustibles, spills, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of equipment (dents, rust, leaks, gage readings out of normal).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (changes to equipment, changes to procedures): Add equipment to Plan.

Comments: _____



Typical oil filled equipment in 53-0365

Areas inspected: 53-0939 Frasier Dome Indoors

List oil filled equipment inspected (attach checklist of items inspected if needed): _____

List any equipment not inspected and why: _____

Item:	Acceptable	Unacceptable
Spill Control equipment (in specified location, complete kit)	<input type="checkbox"/>	<input checked="" type="checkbox"/> – need a spill kit at the area
Housekeeping (combustibles, spills, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of secondary containment (discharge valve closed (if any), accumulated water, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Condition of equipment (dents, rust, leaks, gage readings out of normal).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any changes to facility that impact ability to discharge oil? (changes to equipment, changes to procedures):
Add equipment to Plan.

Comments: _____



Oil filled equipment storage at 53-0939

Items Requiring Corrective Actions (Complete prior to July 1, 2009):

- Complete SPCC Plan updates to include oil filled equipment and current facility oil storage configuration. ENV-RCRA is working with LANSCE facility personnel to update the Plan prior to July 1, 2009.
- Install **newly purchased** spill kits at multiple locations where spill kits do not exist.
- Install adequate containment to prevent a spill from reaching a watercourse at transformers at 53-0002.
- Install adequate containment to prevent a spill from reaching a watercourse at transformers at 53-0003 Sector H.
- Replace portable containers at 53-1180 with containers 225 gallons or less.
- Provide adequate containment at LEDA big blue transformers, repair leaks. Include maintenance records or summary of maintenance in SPCC Plan.

Corrective actions taken (give dates): Before 5/4/2009 transformer leaks (except big blue) were repaired. Spill kits were purchased.

Inspector's signature: 
Owner/Operator signature: _____

Date: 5-26-09
Date: _____

Inventory of TA-53 Oil Containing Equipment / portable container areas

Structure Number (if applicable)	Location (Bldg, Rm)	Name of Equipment	Description	SPCC category	Oil Reservoir/ Storage Capacity (gal)	Type of oil	Type and Size of Secondary Containment	Comments	Spill Control Equipment location
53-0049	West of MPF 2	Transformer/Rectifier	Oil Filled TR	equipment	610 gal.	insulating oil	inspection and spill response, needs berm.	Must install berm to provide adequate containment until spill can be detected and cleaned up. A catastrophic leak from 53-0049 could be noticed immediately during working hours, 53-0051 is inactive and a catastrophic spill would only be detected during a visual inspection.	Bldg 2, inside roll-up door on North Side
53-0049	West of MPF 2	Transformer/Rectifier	Oil Filled IVR	equipment	1965 gal.	insulating oil	inspection and spill response, needs berm.	Adjacent transformers are covered by Utilities SPCC	Bldg 2, inside roll-up door on North Side
53-0051	West of MPF 2	IVR	Oil Filled IVR	equipment	590 gal.	insulating oil	inspection and spill response, needs berm.		Bldg 2, inside roll-up door on North Side
n/a	West of MPF 2	steel cubes	Transformer/Oil	portable container storage area	1-3 portable containers- 350 gal ea	insulating oil	Steel containment estimated 580 gal capacity	FUTURE- Plans to replace portable tank with 350 gal steel cubes	Bldg 2, inside roll-up door on North Side
n/a	West of MPF 2	Mobile Tank	Transformer/Oil	portable container storage area	est 500	insulating oil	Steel containment estimated 580 gal capacity	Plans to replace portable tank with 350 gal steel cubes	Bldg 2, inside roll-up door on North Side
n/a	North of MPF 2	Oil Barrel	Transformer/Oil	Drum storage area	0-20 55 gal. ea	insulating oil	concrete berm estimated 310 gal capacity	Plans to replace drums with 350 gal steel cubes *note: capacity of this area is not adequate for cube size	Bldg 2, inside roll-up door on North Side
53-0002	Building 2, Room 101	805 MHZ Test Stand Modulator Tank	Transformer/Oil	equipment	350 gal.	insulating oil	building with containment trench		Bldg 2, inside roll-up door on North Side
53-0002	Building 2, Room 101	805 MHZ Test Stand Modulator Tank	Transformer/Oil	equipment	350 gal.	insulating oil	building with containment trench		Bldg 2, inside roll-up door on North Side
53-0002	Building 2, Room 101	805 MHZ Test Stand Modulator Tank	Transformer/Oil	equipment	350 gal.	insulating oil	building with containment trench		Bldg 2, inside roll-up door on North Side
53-0002	Building 2, Room 101	805 MHZ Test Stand Modulator Tank	Transformer/Oil	equipment	350 gal.	insulating oil	building with containment trench		Bldg 2, inside roll-up door on North Side
53-0002	Building 2, Room 101	201 Test Stand: 250K Modulator Tank	Transformer/Oil	equipment	115 gal.	insulating oil	building with containment trench		Bldg 2, inside roll-up door on North Side
53-0003	Sector B	Module 5	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector B North Exterior Door
53-0003	Sector B	Module 6	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector B North Exterior Door
53-0003	Sector B	Module 7	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector B North Exterior Door
53-0003	Sector B	Module 8	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector B North Exterior Door
53-0003	Sector B	Module 9	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector B North Exterior Door

Inventory of TA-53 Oil Containing Equipment / portable container areas

Structure Number (if applicable)	Location (Bldg, Rm)	Name of Equipment	Description	SPCC category	Oil Reservoir/ Storage Capacity (gal)	Type of oil	Type and Size of Secondary Containment	Comments	Spill Control Equipment location
53-0003	Sector B	Module 10	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector B North Exterior Door
53-0092	Sector B outside	GE Inductrol	Inductrol Voltage	equipment	590	insulating oil	inspection and spill response	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector B North Exterior Door
53-0092	Sector B outside	GE Transformer	Transformer/Rectifier	equipment	1965	insulating oil	inspection and spill response	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector B North Exterior Door
53-0003	Sector C	Module 11	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector C North Exterior Door
53-0003	Sector C	Module 12	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector C North Exterior Door
53-0003	Sector C	Module 13	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector C North Exterior Door
53-0003	Sector C	Module 14	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector C North Exterior Door
53-0003	Sector C	N/A	Spare Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector C North Exterior Door
53-0003	Sector C	N/A	Spare Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector C North Exterior Door
53-0003	Sector C	Module 15	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector C North Exterior Door
53-0003	Sector C	Module 16	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector C North Exterior Door
53-0003	Sector C	Module 17	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector C North Exterior Door
53-0093	Sector C outside	GE Inductrol	Inductrol Voltage	equipment	635	insulating oil	inspection and spill response	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector C North Exterior Door
53-0093	Sector C outside	GE Transformer	Transformer/Rectifier	equipment	1965	insulating oil	inspection and spill response	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector C North Exterior Door
53-0003	Sector D	Module 18	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector D North Exterior Door
53-0003	Sector D	Module 19	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector D North Exterior Door
53-0003	Sector D	Module 20	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector D North Exterior Door
53-0003	Sector D	Module 21	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector D North Exterior Door
53-0003	Sector D	N/A	Space Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector D North Exterior Door
53-0003	Sector D	Module 22	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector D North Exterior Door
53-0003	Sector D	Module 23	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector D North Exterior Door
53-0003	Sector D	Module 24	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector D North Exterior Door
53-0094	Sector D outside	GE Inductrol	Inductrol Voltage	equipment	635	insulating oil	inspection and spill response	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector D North Exterior Door
53-0094	Sector D outside	GE Transformer	Transformer/Rectifier	equipment	1965	insulating oil	inspection and spill response	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector D North Exterior Door

Inventory of TA-53 Oil Containing Equipment / portable container areas

Structure Number (if applicable)	Location (Bldg, Rm)	Name of Equipment	Description	SPCC category	Oil Reservoir/ Storage Capacity (gal)	Type of oil	Type and Size of Secondary Containment	Comments	Spill Control Equipment location
53-0003	Sector E	Module 25	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector E North Exterior Door
53-0003	Sector E	Module 26	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector E North Exterior Door
53-0003	Sector E	Module 27	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector E North Exterior Door
53-0003	Sector E	N/A	Spare Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector E North Exterior Door
53-0003	Sector E	Module 28	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector E North Exterior Door
53-0003	Sector E	Module 29	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector E North Exterior Door
53-0003	Sector E	Module 30	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector E North Exterior Door
53-0095	Sector E outside	GE Inductrol	Inductrol Voltage	equipment	590 gal.	insulating oil	inspection and spill response	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector E North Exterior Door
53-0095	Sector E outside	GE Transformer	Transformer/Rectifier	equipment	1965 gal.	insulating oil	inspection and spill response	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector E North Exterior Door
53-0003	Sector F	Module 31	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector F North Exterior Door
53-0003	Sector F	Module 32	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector F North Exterior Door
53-0003	Sector F	Module 33	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector F North Exterior Door
53-0003	Sector F	Module 34	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector F North Exterior Door
53-0003	Sector F	Module 35	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector F North Exterior Door
53-0003	Sector F	Module 36	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector F North Exterior Door
53-0003	Sector F	N/A	Spare Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector F North Exterior Door
53-0003	Sector F	N/A	Spare Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector F North Exterior Door
53-0003	Sector F	N/A	Spare Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector F North Exterior Door
53-0096	Sector F Outside	GE Inductrol	Inductrol Voltage	equipment	590 gal.	insulating oil	Needs berm, inspection and spill response		Bldg 3, Sector F North Exterior Door
53-0096	Sector F Outside	GE Transformer	Transformer/Rectifier	equipment	1965 gal.	insulating oil	Needs berm, inspection and spill response	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector F North Exterior Door

Inventory of TA-53 Oil Containing Equipment / portable container areas

Structure Number (if applicable)	Location (Bldg, Rm)	Name of Equipment	Description	SPCC category	Oil Reservoir/ Storage Capacity (gal)	Type of oil	Type and Size of Secondary Containment	Comments	Spill Control Equipment location
53-0003	Sector G	Module 37	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector G North Exterior Door
53-0003	Sector G	Module 38	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector G North Exterior Door
53-0003	Sector G	Module 39	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector G North Exterior Door
53-0003	Sector G	N/A	Spare Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector G North Exterior Door
53-0003	Sector G	Module 40	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector G North Exterior Door
53-0003	Sector G	Module 41	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector G North Exterior Door
53-0003	Sector G	Module 42	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector G North Exterior Door
53-0097	Sector G outside	GE Inductrol	Inductrol Voltage	equipment	635 gal.	insulating oil	inspection and spill response	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector G North Exterior Door
53-0097	Sector G outside	GE Transformer	Transformer/Rectifier	equipment	1965 gal.	insulating oil	inspection and spill response	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector G North Exterior Door
53-0003	Sector H	Module 44	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector H North Exterior Door
53-0003	Sector H	Module 45	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector H North Exterior Door
53-0003	Sector H	N/A	Spare Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector H North Exterior Door
53-0003	Sector H	Module 46	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector H North Exterior Door
53-0003	Sector H	Module 47	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector H North Exterior Door
53-0003	Sector H	Module 48	Modulator Tank	equipment	600	insulating oil	in building, inspection and spill response	modulator tanks may move between sectors	Bldg 3, Sector H North Exterior Door
53-0098	Sector H outside	GE Inductrol	Inductrol Voltage	equipment	590 gal.	insulating oil	inspection and spill response	Must install berm to provide adequate containment until spill can be detected and cleaned up. Though a catastrophic leak would be detected immediately, the spill could still enter the watercourse before it could be controlled. adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector H North Exterior Door
53-0098	Sector H outside	GE Transformer	Transformer/Rectifier	equipment	1965 gal.	insulating oil	inspection and spill response	transformers are covered by Utilities SPCC	Bldg 3, Sector H North Exterior Door
53-0003 outside	Parking Lot West of Sector J (MPF 3)	Spare IVR (805 MHZ)	Transformer/Oil	equipment	590 gal.	insulating oil	6700 gal Spill container		Bldg 3, Sector J Inside South Exterior Door
53-0003 outside	Parking Lot West of Sector J (MPF 3)	Spare TR(805 MHZ)	Transformer/Oil	equipment	1965 gal.	insulating oil	6700 gal Spill container		Bldg 3, Sector J Inside South Exterior Door

Inventory of TA-53 Oil Containing Equipment / portable container areas

Structure Number (if applicable)	Location (Bldg, Rm)	Name of Equipment	Description	SPCC category	Oil Reservoir/ Storage Capacity (gal)	Type of oil	Type and Size of Secondary Containment	Comments	Spill Control Equipment location
53-0003 outside	Parking Lot West of Sector J (MPF 3)	Spare DC Power Supply (MODULE 1)	Transformer/Oil	equipment	467 gal.	insulating oil	6700 gal Spill container		Bldg 3, Sector J Inside South Exterior Door
53-0003 outside	Parking Lot West of Sector J (MPF 3)	Spare IVR (MODULE 1)	Transformer/Oil	equipment	194 gal.	insulating oil	6700 gal Spill container		Bldg 3, Sector J Inside South Exterior Door
53-0072 and ST-1580	north of Sector A	DC Power Supply 33 KV	Module 1 High Voltage Pad	equipment	467 gal.	insulating oil	concrete curbs (smallest =13'-10"x26"x1' or approx 2700 gal) - Capacity sufficient	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector A North Exterior Door (outside)
53-0072 and ST-1580	north of Sector A	IVR	Module 1 High Voltage Pad	equipment	194 gal.	insulating oil	concrete curbs (smallest =13'-10"x26"x1' or approx 2700 gal) - Capacity sufficient	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector A North Exterior Door (outside)
ST-1702	north of Sector A	T/R	Module 2 High Voltage Pad	equipment	1290 gal	insulating oil	concrete curbs (smallest =13'-10"x26"x1' or approx 2700 gal) - Capacity sufficient	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector A North Exterior Door (outside)
ST-1702	north of Sector A	IVR	Module 2 High Voltage Pad	equipment	590 gal.	insulating oil	concrete curbs (smallest =13'-10"x26"x1' or approx 2700 gal) - Capacity sufficient	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector A North Exterior Door (outside)
ST-1701	north of Sector A	Transformer/Rectifier	Module 3 High Voltage Pad	equipment	1290 gal	insulating oil	concrete curbs (smallest =13'-10"x26"x1' or approx 2700 gal) - Capacity sufficient	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector A North Exterior Door (outside)
ST-1701	north of Sector A	IVR	Module 3 High Voltage Pad	equipment	590 gal.	insulating oil	concrete curbs (smallest =13'-10"x26"x1' or approx 2700 gal) - Capacity sufficient	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector A North Exterior Door (outside)
ST-1700	north of Sector A	Transformer/Rectifier	Module 4 High Voltage Pad	equipment	1290 gal	insulating oil	concrete curbs (smallest =13'-10"x26"x1' or approx 2700 gal) - Capacity sufficient	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector A North Exterior Door (outside)
ST-1700	north of Sector A	IVR	Module 4 High Voltage Pad	equipment	590 gal.	insulating oil	concrete curbs (smallest =13'-10"x26"x1' or approx 2700 gal) - Capacity sufficient	adjacent transformers are covered by Utilities SPCC	Bldg 3, Sector A North Exterior Door (outside)
53-0003	MPF-3, J003, Sector J	H+ Step Up Transformer	Transformer Oil	equipment	100 gal	insulating oil	building with containment lining		Bldg 3, Sector J Basement by J002
53-0003	MPF-3, J003, Sector J	H+ Step Up Transformer	Transformer Oil	equipment	100 gal	insulating oil	building with containment lining		Bldg 3, Sector J Basement by J002

Inventory of TA-53 Oil Containing Equipment / portable container areas

Structure Number (if applicable)	Location (Bldg, Rm)	Name of Equipment	Description	SPCC category	Oil Reservoir/ Storage Capacity (gal)	Type of oil	Type and Size of Secondary Containment	Comments	Spill Control Equipment location
53-0003	MPF-3, J003, Sector J	H+ Isolation Transformer	Transformer Oil	equipment	Unknown but> 55 gal	insulating oil	building with containment lining		Bldg 3, Sector J
53-0003	MPF-3, J003, Sector J	H+ Isolation Transformer	Transformer Oil	equipment	Unknown but> 55 gal	insulating oil	building with containment lining		Basement by J002
53-0003	MPF-3, J002, Sector J	H- Step Up Transformer	Transformer Oil	equipment	100 gal	insulating oil	building with containment lining		Basement by J002
53-0003	MPF-3, J002, Sector J	H- Step Up Transformer	Transformer Oil	equipment	100 gal	insulating oil	building with containment lining		Basement by J002
53-0003	MPF-3, J002, Sector J	H- Isolation Transformer	Transformer Oil	equipment	Unknown but> 55 gal	insulating oil	building with containment lining		Basement by J002
53-0003	MPF-3, J002, Sector J	H- Isolation Transformer	Transformer Oil	equipment	Unknown but> 55 gal	insulating oil	building with containment lining		Basement by J002
53-0003	J02 Sector J	H- transformer	transformer	equipment	Unknown but> 55 gal	insulating oil	building with containment lining		Basement by J002
53-0003	J02 Sector J	H- transformer	transformer	equipment	Unknown but> 55 gal	insulating oil	building with containment lining		Basement by J002
53-0003	J03 Sector J	H+ transformer	transformer	equipment	Unknown but> 55 gal	insulating oil	building with containment lining		Basement by J002
53-0003	J03 Sector J	elevator reservoir	elevator reservoir	equipment	Unknown but> 55 gal	insulating oil	building with containment lining		Basement by J002
53-0003	MPF-3, Sector B Cage	Step Up Transformer Spare	Transformer Oil	equipment	100 gal	insulating oil	in building, inspection and spill response	equipment in storage	Bldg 3, Sector B North Exterior Door
53-0003	MPF-3, Sector B Cage	Step Up Transformer Spare	Transformer Oil	equipment	100 gal	insulating oil	in building, inspection and spill response	equipment in storage	Bldg 3, Sector B North Exterior Door
53-0003	MPF-3, Sector B Cage	Isolation Transformer Spare	Transformer Oil	equipment	Unknown but> 55 gal	insulating oil	in building, inspection and spill response	equipment in storage	Bldg 3, Sector B North Exterior Door
53-0003	MPF-3, Area A East	Scintillation Fluid	Mineral Oil & Vitamin E	equipment	1735	insulating oil	Fabric Berm 1795 gal		Bldg 3, Area A East by Northeast Rollup door
53-1180	WMC RAD Storage Area north of Bldg 3, Sector A	Tuff Tanks	Used Oil	portable storage area	2 330 gal tanks	used oil	Containment Structure 5'-11"x10'4"x6" = 228 gallons.	Will need to replace with smaller tanks.	West Side of Structure 1180 in Rad Storage Area (outside)
n/a	North of Bldg 315	55 gallon drum	Scintillator Oil	Drum storage area	1-8 55 gal	insulating oil	Containment Structure approx 350 gallons.	Could not measure accurately through cover.	North of Bldg 315 (outside)
53-0018	MPF-18, Rm 100A	HVPS	Univolt Transformer Oil	equipment	232 gal	insulating oil	in building, inspection and spill response		Bldg 18, Main North Exterior Door
53-0018	MPF-18, Rm 100A	HVPS	Univolt Transformer Oil	equipment	100 gal	insulating oil	in building, inspection and spill response		Bldg 18, Main North Exterior Door
53-0018	MPF-18, Rm 129	Injector Test Stand	Transformer Oil	equipment	230 gal	insulating oil	in building, inspection and spill response		Bldg 18, Main North Exterior Door
53-0018	MPF-18, Rm 129	Injector Test Stand	Transformer Oil	equipment	400 gal	insulating oil	in building, inspection and spill response		Bldg 18, Main North Exterior Door
53-0018	Parking lot west of MPF 18	Diala AX Transformer Oil	Oil Barrel	Drum storage area	1-28 drums 55 gal.	insulating oil	in building, inspection and spill response 67 gal. Containment Pallets		Bldg 18, Main North Exterior Door
53-0018	Parking Lot North of MPF 18	Envirotemp 200 Fluid	portable container	Drum storage area	1-3 550 gal steel	insulating oil	Steel containment structure 8'-9"x8"x15'-3"= 665 gallons		Bldg 18, Main North Exterior Door

Inventory of TA-53 Oil Containing Equipment / portable container areas

Structure Number (if applicable)	Location (Bldg, Rm)	Name of Equipment	Description	SPCC category	Oil Reservoir/ Storage Capacity (gal)	Type of oil	Type and Size of Secondary Containment	Comments	Spill Control Equipment location
53-0018 outside	Parking Lot North of MPF 18	Envirotemp 200 Fluid	portable container	Drum storage area	1-3 330 gal plastic	insulating oil	Steel containment structure 8'-9"x8"x15'-3"= 665 gallons		Bldg 18, Main North Exterior Door
53-0018 outside	Parking Lot North of MPF 18	Envirotemp 200 Fluid	portable container	Drum storage area	1-3 350 gal. steel	insulating oil	Steel containment structure 8'-9"x8"x15'-3"= 665 gallons		Bldg 18, Main North Exterior Door
53-0018 outside	Parking Lot North of MPF 18	Envirotemp 200 Fluid	portable container	Drum storage area	1-8 55 gal. drum	insulating oil	Steel containment structure 8'-9"x8"x15'-3"= 665 gallons		Bldg 18, Main North Exterior Door
Outside off of La Mesitia and N of LEDA	outside Bldg 365/LEDA (parking lot West of MPF 365 RF pad)	Oil from IVR	Oil Barrel	Drum storage area	between 1-75 55 gal drums	insulating oil	containment pallets		Bldg 365 RF Pad at West gate between transformer pad and drum storage (outside)
Outside off of La Mesitia and N of LEDA	MPF 365 RF pad	561 Silicone Transformer Oil	K0 Transformer/Rectifier	equipment	2500 gal.	insulating oil	Facility Containment Trench - 56'-3"x2'x2'=1683 gallons		Bldg 365 RF Pad at West gate between transformer pad and drum storage (outside)
Outside off of La Mesitia and N of LEDA	MPF 365 RF pad	561 Silicone Transformer Oil	K1 Transformer/Rectifier	equipment	2500 gal.	insulating oil	Facility Containment Trench - 56'-3"x2'x2'=1683 gallons		Bldg 365 RF Pad at West gate between transformer pad and drum storage (outside)
Outside off of La Mesitia and N of LEDA	MPF 365 RF pad	561 Silicone Transformer Oil	K2 Transformer/Rectifier	equipment	2500 gal.	insulating oil	Facility Containment Trench - 56'-3"x2'x2'=1683 gallons		Bldg 365 RF Pad at West gate between transformer pad and drum storage (outside)
Outside off of La Mesitia and N of LEDA	MPF 365 RF pad	561 Silicone Transformer Oil	K3 Transformer/Rectifier	equipment	2500 gal.	insulating oil	Facility Containment Trench - 56'-3"x2'x2'=1683 gallons		Bldg 365 RF Pad at West gate between transformer pad and drum storage (outside)
Outside off of La Mesitia and N of LEDA	MPF 365 RF pad	Transformer Oil	One 300-gal Tuff Tank	Drum storage area	300 gal.	insulating oil	Facility Containment Trench - 56'-3"x2'x2'=1683 gallons		Bldg 365 RF Pad at West gate between transformer pad and drum storage (outside)
Outside off of La Mesitia and N of LEDA	MPF 365 RF pad	misc out of service equipment	misc out of service equipment	Drum storage area	Unknown but> 55 gal.	insulating oil	Facility Containment Trench - 56'-3"x2'x2'=1683 gallons		Bldg 365 RF Pad at West gate between transformer pad and drum storage (outside)

Inventory of TA-53 Oil Containing Equipment / portable container areas

Structure Number (if applicable)	Location (Bldg, Rm)	Name of Equipment	Description	SPCC category	Oil Reservoir/ Storage Capacity (gal)	Type of oil	Type and Size of Secondary Containment	Comments	Spill Control Equipment location
Outside off of La Mesita and N of LEDA	MPF 365 RF pad	Envirotemp 200 Fluid	Oil Barrel	Drum storage area	1-3 55-gal drums	insulating oil	Facility Containment Trench - 56'-3"x2'x2' = 1683 gallons		Bldg 365 RF Pad at West gate between transformer pad and drum storage (outside)
53-365	MPF 365 RF Mezzanine	Envirotemp 200 Oil	K0 Transmitter Tank	equipment	500 gal.	insulating oil	in building, inspection and spill response		Bldg 365 Gate on East Side of Mezzanine Level
53-365	MPF 365 RF Mezzanine	Envirotemp 200 Oil	K1 Transmitter Tank	equipment	500 gal.	insulating oil	in building, inspection and spill response		Bldg 365 Gate on East Side of Mezzanine Level
53-365	MPF 365 RF Mezzanine	Envirotemp 200 Oil	K2 Transmitter Tank	equipment	500 gal.	insulating oil	in building, inspection and spill response		Bldg 365 Gate on East Side of Mezzanine Level
53-365	MPF 365 RF Mezzanine	Envirotemp 200 Oil	K3 Transmitter Tank	equipment	500 gal.	insulating oil	in building, inspection and spill response		Bldg 365 Gate on East Side of Mezzanine Level
53-365	MPF 365 RF Mezzanine	Envirotemp 200 Oil	K4 Transmitter Tank	equipment	500 gal.	insulating oil	in building, inspection and spill response		Bldg 365 Gate on East Side of Mezzanine Level
53-365	MPF 365 RF Mezzanine	Envirotemp 200 Oil	K5 Transmitter Tank	equipment	500 gal.	insulating oil	in building, inspection and spill response		Bldg 365 Gate on East Side of Mezzanine Level
53-365	MPF 365 West High Bay	Envirotemp 200 Oil	K4 IGBT Filter Tank	equipment	500 gal.	insulating oil	in building, inspection and spill response		Bldg 365 SE Roll-up door btwn tunnel and high bay
53-365	MPF 365 West High Bay	Envirotemp 200 Oil	K5 IGBT Filter Tank	equipment	500 gal.	insulating oil	in building, inspection and spill response		Bldg 365 SE Roll-up door btwn tunnel and high bay
53-365	MPF 365 West High Bay	Envirotemp 200 Oil	K5 IGBT Filter Tank	equipment	500 gal.	insulating oil	in building, inspection and spill response		Bldg 365 SE Roll-up door btwn tunnel and high bay
53-0028	MPF - 28 Room 200	SRFK 071	Fast Kicker Modulator 71	equipment	706 gal.	insulating oil	in building, inspection and spill response	Floor drains go to sanitary, should replug drains	Bldg 28 North Exterior Door
53-0028	MPF - 28 Room 200	SRFK 081	Fast Kicker Modulator 81	equipment	706 gal.	insulating oil	in building, inspection and spill response	Floor drains go to sanitary, should replug drains	Bldg 28 North Exterior Door
53-0028	MPF - 28 Room 200	55 gallon drum	Shell Diala AX barrel	Drum storage area	0-4 55 gal.	insulating oil	Spill Pallet 120 gal. (4'x4'x1')		Bldg 28 North Exterior Door
53-0939	Frazier Dome, MPF 939	Step Up Transformer Spare	Transformer Oil	equipment	100 gal	insulating oil	in building, monthly monitoring and spill response		Bldg 939 West Exterior door
53-0939	Frazier Dome, MPF 939	Step Up Transformer Spare	Transformer Oil	equipment	100 gal	insulating oil	in building, monthly monitoring and spill response		Bldg 939 West Exterior door
53-0939	Frazier Dome, MPF 939	Isolation Transformer Spare	Transformer Oil	equipment	Unknown but > 55 gal	insulating oil	in building, monthly monitoring and spill response		Bldg 939 West Exterior door
53-0939	Frazier Dome, MPF 939	Isolation Transformer Spare	Transformer Oil	equipment	Unknown but > 55 gal	insulating oil	in building, monthly monitoring and spill response		Bldg 939 West Exterior door



TA-53-0315 SPCC BMP SITE MAP
NTS



TA-53-18 SPCC BMP SITE MAP
NTS

GENERAL NOTES

1. IF THIS SHEET IS NOT 24" X 36" THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.

NO.	DATE	CLASS. REV.	DESCRIPTION	OWN	NOT CHD	SUB	APP

SPCC SITE MAP TEMPORARY BMP LOCATIONS		DESIGN: [] DESIGN: [] CHECKED: []
BLDG: [] SUBMITTED: []	APPROVED FOR RELEASE: [] PROJECT: []	DATE: [] DATE: []
Los Alamos NATIONAL LABORATORY CLASSIFICATION: [] PROJECT ID: []		SHEET: SPCC-2 OF: [] DATE: []
XXXXXXXX CXXXXXXXXXXXXXXXXX REV: []		DRAWING NO.: [] REVISION NUMBER: [] DATE: []

Contingency Plan

Last Revised – October 1, 2008

Included with:

Los Alamos National Laboratory General Part B Permit Renewal Application, Revision 2.0, August 2003

LA-UR-03-5923

Excerpt from LA-UR-08-05708 added October 1, 2008

Note: This document is an interim status document and only the emergency coordinator contacts have been changed.

APPENDIX E (Of LA-UR-08-05708)

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LIST OF ABBREVIATIONS/ACRONYMS

20.4.1 NMAC	New Mexico Administrative Code, Title 20, Chapter 4, Part 1
BEP	building emergency plan
CAS	Central Alarm Station
DOE	U.S. Department of Energy
DX	Dynamic Experimentation
EM&R	Emergency Management and Response
EMP	Emergency Management Plan
EOC	Emergency Operations Center
HAZMAT	Hazardous Materials
HMGS	Hazardous Materials Group Supervisor
HSR	Health, Safety, and Radiation Protection
HSR-1	Health Physics Operations Group
HSR-2	Occupational Medicine Group
HSR-5	Industrial Hygiene and Safety Group
IC	Incident Commander
ICS	Incident Command System
KSL	KBR-Shaw-LATA
LACFD	Los Alamos County Fire Department
LACPD	Los Alamos County Police Department
LAMC	Los Alamos Medical Center
LANL	Los Alamos National Laboratory
LASO	Los Alamos Site Office

**LIST OF ABBREVIATIONS/ACRONYMS
(Continued)**

NAWAS	National Warning System
NIIMS	National Interagency Incident Management System
NMED	New Mexico Environment Department
NNSA	National Nuclear Security Administration
PA	public address
PPE	personal protective equipment
PS	Performance Surety
PTLA	Protection Technology Los Alamos
RRES	Risk Reduction and Environmental Stewardship
RRES-MAQ	Meteorology and Air Quality Group
RRES-SWRC	Solid Waste Regulatory Compliance Group
RRES-WQH	Water Quality and Hydrology Group
S	Security and Safeguards
S-10	Hazardous Materials Response Group
TA	technical area

APPENDIX E

CONTINGENCY PLAN

This appendix presents contingency measures applicable to all hazardous or mixed waste units at Los Alamos National Laboratory (LANL) included in technical area (TA)-specific permit applications, permit modification requests, or permit renewal applications. This Contingency Plan is intended to meet the requirements specified in the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20.4.1 NMAC), Subpart V, Part 264, Subpart D, revised June 14, 2000 [6-14-00], and 20.4.1 NMAC § 270.14(b)(7) [6-14-00], for hazardous waste treatment and storage facilities. In addition, this plan is consistent with the LANL Emergency Management Plan (EMP) (LANL, 2002), prepared by the LANL Emergency Management and Response (EM&R) Office. The provisions of this plan will be carried out immediately to minimize hazards whenever there is a fire, explosion, or release of hazardous or mixed waste or hazardous or mixed waste constituents that could threaten human health or the environment, as required by 20.4.1 NMAC § 264.51(b) [6-14-00]. When necessary, additional Contingency Plan information will be provided in Attachment E of TA-specific permit applications, permit modification requests, or permit renewal applications. Individual facilities at LANL may have their own facility-specific emergency plans and/or procedures to follow in the event of a fire, explosion, or release of hazardous and/or mixed waste.

E.1 HAZARDOUS AND MIXED WASTE EMERGENCY RESPONSE RESOURCES [20.4.1 NMAC §§ 264.52(c) and 264.53]

The management of hazardous and mixed waste emergency incidents at LANL resides within the EM&R Office, which is part of the Security and Safeguards (S) Division. During an emergency situation, line management (i.e., the Group Leader of the affected area) works with the Duty Emergency Manager from the EM&R Office. The Emergency Manager has primary responsibility for managing emergency response operations, making appropriate notifications, activating the emergency response organizations, and proceeding to the scene. The Emergency Manager has authority to assume the role of Incident Commander (IC) during an emergency and typically assumes full responsibility for management of the emergency response operations at the scene. (Personnel from other organizations, such as the Federal Bureau of Investigation or the Los Alamos County Fire Department [LACFD], may also assume the role of IC, depending upon the type of emergency and responding organizations.) Additional LANL resources that may provide assistance in an emergency include personnel from the Health, Safety, and Radiation Protection (HSR) Division, Risk Reduction and Environmental Stewardship (RRES) Division, and Performance Surety

(PS) Division at LANL. These groups as well as other groups in S Division are discussed in Sections E.1.2, E.1.3, and E.1.6.

Laboratory-contracted support services and other agencies are also available for assistance during emergencies. These are discussed in Section E.1.5 and include the contracted services of Protection Technology Los Alamos (PTLA) for security and the LACFD. Facility maintenance and heavy equipment operation are provided by KBR-Shaw-LATA (KSL). These contracted services, if changed, will be replaced and/or supplemented with functionally equivalent contracted services required to assume the same duties and responsibilities described in this section. Other outside response agencies are discussed in Section E.1.7 and include the Los Alamos County Police Department (LACPD) and the Los Alamos Medical Center (LAMC). The LACPD and the LAMC each provide assistance under a memorandum of understanding with the U.S. Department of Energy (DOE).

The Laboratory, as required by DOE and the State of New Mexico, uses the Incident Command System (ICS) in response to all emergencies. The ICS is based on the on-scene management structure protocols of the National Interagency Incident Management System (NIIMS). The NIIMS is a national standard that provides consistency in terminology/methodology and allows for an integrated emergency response both locally and nationally, if necessary. Consequently, this Contingency Plan may undergo modification.

The IC (e.g., Duty Emergency Manager) coordinates all groups and agencies responding to the emergency and personnel operating at the scene using the ICS. The general emergency notification structure, illustrated on Figure E-1, is designed to expand and contract, as appropriate, to include the response groups/agencies needed to address any particular emergency.

The IC may appoint and utilize a network of support personnel to assess, plan for, and mitigate emergencies. These personnel can include, but are not limited to, a Safety Officer, a Public Information Officer, and a Liaison Officer that report directly to the IC and are responsible for issues related to safety, information, and the interaction of various groups associated with the overall emergency. Also reporting directly to the IC are an Operations Section Chief, Logistics Section Chief, Planning Section Chief, and an Administrative Section Chief. The Operations Section Chief oversees the Fire Branch and the Emergency Medical Services Branch, and is responsible for the

actual emergency response. The Logistics Section Chief is responsible for providing support personnel and equipment necessary for the emergency response. The Planning Section Chief is responsible for planning the active mitigation and recovery for the emergency. The Administrative Section Chief is responsible for keeping records of expenditures. In some instances, some or all of these positions may be activated, as the emergency warrants. During an emergency at LANL, assistance may be provided to the IC and the IC's appointees by a large variety of response groups/agencies. The responsibilities and/or assistance available from the various response groups/agencies are listed in Table E-1 and discussed briefly in Sections E.1.2 through E.1.7.

A copy of this Contingency Plan and any revisions will be provided to each of the emergency response groups/agencies (including the LACPD, LACFD, and LAMC). LANL's Solid Waste Regulatory Compliance Group (RRES-SWRC) is responsible for the controlled distribution of this plan. Amendments to this plan are discussed in Section E.12.

E.1.1 Emergency Management and Response Office [20.4.1 NMAC §§ 264.52(d) and 264.55]

The Director of LANL has delegated the authority and responsibility for administering and implementing LANL's emergency management program to the S Division, which includes the EM&R Office. The EM&R Office coordinates and issues LANL's EMP and provides response coordination for emergencies. The EM&R Office also provides a 24-hour Duty Emergency Manager to respond to emergencies, including hazardous and mixed waste releases. The LANL Emergency Manager is the functional equivalent of the Emergency Coordinator (20.4.1 NMAC § 264.55 [6-14-00]). The EM&R Office maintains an Emergency Operations Center (EOC) in a ready condition, should a center be required. The primary EOC is located at TA-59, Building 1 (TA-59-1). An alternate EOC is located at TA-49-113. After September 30, 2003, the primary EOC will be located at TA-69, Building 33 (TA-69-33). Should an EOC be activated during an emergency, additional emergency personnel can be requested by the IC through the EOC.

Assignment as the Duty (i.e., primary) Emergency Manager is rotated. The Duty Emergency Manager can be reached 24 hours a day by contacting the EM&R Office at 667-6211 or the Central Alarm Station (CAS) operator (911).

The Duty Emergency Manager will respond to emergency incidents involving the release of hazardous or mixed waste to the environment, including spills, fires, and explosions. With input from the appropriate LANL groups, the Duty Emergency Manager will initially assess the possible

hazards to human health or the environment and, if assuming incident command, will use whatever response personnel and/or emergency equipment necessary to control and contain the waste. In the event of an emergency, the Emergency Manager typically becomes the IC with full responsibility for field activities (including safety, operations, and planning, or establishing these positions within the ICS). As described previously, the exception to this is when on-site personnel can adequately address the emergency and maintain incident command internally. At the scene of the emergency, the IC will assemble the ICS, as required, for response to the emergency.

The Duty Emergency Manager responding to an emergency will have access to a copy of the appropriate building emergency plan(s) (BEP) for the area in which the incident is occurring. These plans are maintained by the facility manager where a waste management unit is located and are available at the EM&R Office at TA-59; they are also located on site for use by emergency response personnel. The various response groups will obtain specific information relating to the facilities involved (including the layout of all affected buildings; the location of evacuation routes, equipment, and personnel; properties of the materials/wastes managed at the facility; and the hazards associated with these materials/wastes) from the BEP(s) and other site-specific information.

Listed below is the name, address, and phone number of the current Primary and Alternate Emergency Coordinator, as required by 20.4.1 NMAC § 264.52(d) [6-14-00].

Primary	Alternate
Dennis Armstrong	William Purtymun
998 Capulin Road	1000 East Field Place
Los Alamos, NM 87544	Los Alamos, NM 87544
(H) 505-662-3514	(H) 505-662-9886
(W) 505-667-6211	(W) 505-667-6211

Please see Table D-2 for updated contacts

To assure timely notifications during an emergency, one must call 911 or 667-6211 to obtain the on-call Duty Emergency Manager.

E.1.2 Hazardous Materials Response Group

The Hazardous Materials (HAZMAT) Team is comprised of personnel from the Hazardous Materials Response Group (S-10). The HAZMAT Team is responsible for the aggressive mitigation of chemical, radiological, hazardous waste, and mixed waste emergencies, including field

decontamination of responders and response equipment. At the request of the IC, the HAZMAT Team may provide limited field decontamination support for victims. The HAZMAT Team is capable of providing a decontamination station at the scene of a hazardous material incident to process people working in a contaminated area and is prepared to perform decontamination of personnel. LANL standards require that the HAZMAT Team meet the training criteria for emergency response personnel specified in the Code of Federal Regulations, Title 29, §1910.120(q)(6)(iii), (iv), and (v). The HAZMAT Team acts as part of the ICS reporting through the HAZMAT Group Supervisor (HMGS) via the Operations Section Chief. The LANL HMGS coordinates the HAZMAT Team and radiological field monitoring activities.

During an emergency response, S-10 may also provide site field monitoring to determine the nature and extent of contamination, provide information on correct handling of chemicals, make recommendations on protective clothing and equipment, and provide exposure and treatment information to responders. To operate effectively, S-10 may obtain resources from HSR groups, such as the Health Physics Operations Group (HSR-1) and the Industrial Hygiene and Safety Group (HSR-5).

E.1.3 RRES Division Response Groups

At the scene, representatives and technical advisors from RRES Division and other response personnel are coordinated by the IC. In addition to their post-emergency duties, they may also be responsible for on-scene emergency operations such as planning. Depending on the type of emergency and the associated hazards, an individual from the most relevant group in the RRES Division will assume the position of the Environmental Safety and Health Advisor, will provide technical support, and will ensure LANL compliance with applicable federal, state, and local regulations.

E.1.3.1 Ecology Group

The Ecology Group provides field surveys of soil, foodstuffs, and biota to determine environmental effects of exposure after an emergency.

E.1.3.2 Meteorology and Air Quality Group

The Meteorology and Air Quality Group (RRES-MAQ) provides field surveys of air to determine environmental impacts and dose equivalent to members of the public after a radiological

emergency. In addition, RRES-MAQ provides expertise in meteorology to project short- and long-term environmental effects of emergency conditions.

E.1.3.3 Solid Waste Regulatory Compliance Group

RRES-SWRC provides guidance on regulatory requirements for proper treatment, storage, and transportation of hazardous and mixed wastes to other LANL groups. After an emergency, RRES-SWRC provides field sampling (e.g., of soil, spills, or potentially hazardous waste) to determine environmental effects of exposure.

E.1.3.4 Water Quality and Hydrology Group

After an emergency, the Water Quality and Hydrology Group (RRES-WQH) provides sampling of surface water runoff and sediments to determine environmental effects of an emergency and performs assessments for regulatory reporting requirements. RRES-WQH also provides expertise in hydrogeology to establish short- and long-term environmental effects of emergency conditions.

E.1.4 Other LANL Response Resources

Emergency response personnel from the Nuclear Materials Technology Division at TA-55 have been trained to respond to emergencies at that facility. Dynamic Experimentation (DX) Division personnel are responsible for the hazardous waste management units at TA-14, TA-36, and TA-39. DX personnel responsible for these units are trained in emergency procedures and may provide information and/or assistance during emergencies involving high explosive waste. Engineering Sciences and Applications Division personnel are responsible for hazardous waste management units at TA-16. These personnel are also trained in emergency procedures and may provide information and/or assistance during emergencies involving units at TA-16. Personnel from the Facilities and Waste Operations Division may provide guidance on proper treatment, storage, and transportation of hazardous and mixed waste at TA-50 and TA-54.

E.1.5 Contracted Response Groups

Contracted response groups' representatives may report directly to the IC Post, if requested. If the IC deems it necessary, the IC may designate an Operations Section Chief to aid in the coordination and direction of these groups. In addition, contracted response groups may report to a staging area, with a representative going either to the IC Post or, if activated, to the EOC.

E.1.5.1 Protection Technology Los Alamos

PTLA is the subcontractor for LANL security and provides this service under contract to LANL. During an emergency, PTLA activities include maintaining security, directing traffic within LANL, and controlling access to the emergency scene. PTLA maintains the necessary equipment (such as crowd-control equipment and patrol vehicles) to perform these functions.

E.1.5.2 KBR-Shaw-LATA (KSL)

KSL provides a maintenance support force under contract to LANL. This support force is under LANL's direction in an emergency. KSL also provides a representative to LANL in the event of an emergency and participates, as necessary, in post-emergency cleanup under the direction of a Recovery Manager designated by the IC. The duties of the Recovery Manager are discussed in Section E.10.

E.1.5.3 Los Alamos County Fire Department

The LACFD provides fire protection and ambulance coverage for the residential communities of Los Alamos and White Rock and for LANL. In the case of an emergency within LANL, the LACFD coordinates fire suppression and Emergency Medical Services. The IC retains overall responsibility for the emergency response effort.

E.1.6 LANL Support Groups

E.1.6.1 Health Physics Operations Group

HSR-1 provides field personnel to perform routine site evaluation and monitoring to determine radiological conditions in facilities. HSR-1 also provides guidance on radiological decontamination. In addition, this group augments the assessment and monitoring functions of the HAZMAT Team.

E.1.6.2 Occupational Medicine Group

LANL maintains its own medical facility operated by the Occupational Medicine Group (HSR-2). HSR-2 provides appropriate medical treatment for occupation-related illnesses and injuries and monitors employees to assess the effectiveness of health protection programs. In addition to promoting early identification and prevention of illnesses or injuries that may arise from exposures to hazardous or radioactive materials, HSR-2 maintains records of the health status of employees and related occupational medicine activities.

Although HSR-2 is not routinely involved with on-scene emergency response, the group maintains a central medical facility with a fully equipped emergency room and decontamination facilities at TA-3,

Building 409. The location of this and other emergency facilities are shown on Figure E-2. Medical staff at these facilities include physicians, physician's assistants, nurses, technicians, and counselors. All full-time physicians and nurses receive radiation accident training. HSR-2 also maintains access to a database that provides the clinical staff with timely toxic exposure and treatment information.

E.1.6.3 Industrial Hygiene and Safety Group

HSR-5 assists HSR-2 with its ability to obtain additional exposure and treatment information. In addition, HSR-5 maintains computer access to the National Institute of Occupational Safety and Health Technical Information Center and the Registry of Toxic Effects of Chemical Substances. During routine operations, HSR-5 performs site evaluations and field testing to determine the nature and extent of chemical contamination and specifies protective clothing and equipment.

E.1.6.4 Occurrence Reporting Group

The PS Division hosts the Occurrence Reporting Group, whose personnel assist the facility manager in investigating all adverse environmental, safety, health, and operational occurrences (on-site and off-site), determining the causal factors, identifying the appropriate corrective actions, and assisting in the preparation of reports documenting the occurrence to DOE. This group tracks corrective actions associated with such occurrences and maintains the information in an on-site database.

E.1.7 Outside Response Agencies

During an emergency, outside response agencies report directly to the IC. An Operations Section Chief, designated by the IC, may aid in coordinating and directing the groups responding to an emergency.

E.1.7.1 Los Alamos County Police Department

The LACPD may assume IC under unique circumstances, but usually has only minimal interaction with LANL in an on-site emergency. This interaction normally involves traffic control on DOE roads with public access, handling criminal activity, and criminal investigations.

E.1.7.2 Los Alamos County Emergency Management Coordinator

Los Alamos County has an agreement with LANL's EM&R Office to provide assistance in certain emergency situations. If an emergency occurs on LANL property that may affect the communities

of Los Alamos and White Rock, the EM&R Office will notify the Los Alamos County Emergency Management Coordinator, who will coordinate necessary emergency actions throughout the county.

E.1.7.3 Los Alamos Medical Center

LANL maintains a fully equipped decontamination room adjacent to the emergency room at LAMC. In the event that a case is sent to LAMC, support for the emergency room staff is provided by HSR-2 medical personnel. HSR-1, HSR-5, and S-10 personnel also provide assistance to the emergency room staff; assistance from additional LANL resources is provided, as necessary. Assistance is coordinated through the EM&R Office.

E.2 EMERGENCY EQUIPMENT AND COMMUNICATIONS [20.4.1 NMAC § 264.52(e)]

E.2.1 Emergency Equipment

20.4.1 NMAC, Subpart V, Part 264, Subpart D [6-14-00], requires a listing of all emergency response equipment available that can be used in the event of an emergency. Table E-2 lists emergency equipment available for use at any of LANL's hazardous or mixed waste management units. The list includes emergency equipment available in the HAZMAT vehicles and trailers as well as supplemental emergency equipment maintained by the LACFD, KSL, and HSR-2. A list of emergency equipment available for use at specific hazardous and/or mixed waste management units is presented in Attachment E of TA-specific permit applications, permit modification requests, or permit renewal applications. Emergency equipment listed in Table E-2 may be replaced and/or upgraded with functionally equivalent components and equipment, as necessary, for routine maintenance and repair.

E.2.2 Emergency Communications [20.4.1 NMAC § 264.56(a)]

Effective emergency response at LANL requires an efficient communication system that will integrate required personnel into the emergency response. The initial phase of an emergency may involve a small number of individuals at the affected area, require notification of the Duty Emergency Manager, and utilize local communication equipment and/or systems. When responding to hazardous and/or mixed waste emergencies, the EM&R Office can provide communications between response units and emergency organizations.

E.2.2.1 Central Alarm Station

The LANL CAS is manned by PTLA or security personnel 24 hours a day and is equipped with telephones (including direct-line telephones), medium- and short-range radios, a National Warning

System (NAWAS) station, and an emergency power system. The fire alarm board at the control room gives the location of automatic and manual fire alarm equipment. The CAS receives alarms from several sources and, in turn, notifies the Duty Emergency Manager of a hazardous or mixed waste emergency. Sources include:

- Telephone communication (911)
- Automatic fire alarms
- Manual pull alarms
- Computer interface (to warn of critical events at selected facilities)
- Security alarms
- Radio communications.

Upon receipt of an alarm, the CAS operator notifies the LACFD and the Duty Emergency Manager. The Emergency Manager, the EOC communicator, and/or the CAS operator may request emergency response groups to respond. Should the LANL 911 system fail, the Los Alamos County System, located at the LACPD Station, will be used to activate emergency response groups.

E.2.2.2 Power Dispatch

The Power Dispatch is maintained 24 hours a day. Alarms at this facility are connected to LANL experiments, equipment, and/or buildings to record outages and hazardous conditions. Any conditions that activate these alarms will be reported immediately to the building management or to the CAS operator for notification and response.

E.2.2.3 Additional Communication Systems

Internal communication systems at LANL include:

- The Centrex telephone system
- A telephone paging system
- A variety of frequency modulated very high frequency simplex repeater systems, including:
 - Multiple base stations
 - Mobile and hand-held units
 - Links to New Mexico public safety agencies
- An ultrahigh frequency radio system, including:
 - Multiple antenna sites

- Mobile and base units
- Links with the LACPD, the LACFD, and the State Medical System
- A 400-megahertz trunked radio system that includes a link with the LACFD
- Transmission and reception (through the EOC) for:
 - Secure telephone
 - Secure fax
 - Secure still video
 - Secure videoconference system (to all DOE EOCs and DOE Headquarters)
- Access to all radio systems outlined above (through the EOC).

Off-site communications with federal, state, tribal, county, and other agencies are available through the following:

- A Centrex telephone system
- Private telephone lines (if Centrex fails)
- Two NAWAS stations
- A link to KRSN radio (local radio station)
- The local cable television
- The Community Alert Network.

The LANL EOC, maintained by the EM&R Office, operates radio systems on key LANL and off-site channels. Emergency personnel responding to on-site incidents have the benefit of wide-area radio coverage using EOC facilities. The Duty Emergency Manager is responsible for activating whatever support personnel, equipment, or services are needed 24 hours a day.

E.3 CONTINGENCY PLAN IMPLEMENTATION [20.4.1 NMAC § 264.56]

The following sections discuss guidelines used to implement this plan, emergency notification, emergency manager actions, and actions to be taken in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents into the environment at LANL.

E.3.1 Guidelines For Implementation [20.4.1 NMAC §§ 264.51(b) and 264.56]

The decision to implement this plan depends upon whether an emergency exists, which for the purposes of this section is defined as an imminent or actual incident arising from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste

constituents that could threaten human health or the environment. The Duty Emergency Manager or IC will use the guidelines listed below to decide whether to implement this plan.

This plan will be implemented immediately in the following situations involving releases or potential releases of hazardous or mixed waste:

- Spills:
 - If a hazardous or mixed waste spill cannot be contained with secondary containment or application of sorbents
 - If a hazardous or mixed waste spill causes the release of flammable material, creating a fire or explosion hazard
 - If a hazardous or mixed waste spill results in toxic fumes that threaten human health
- Explosions:
 - If an unplanned explosion involving hazardous or mixed waste occurs
 - If an imminent danger of an explosion involving hazardous or mixed waste exists.
- Fires:
 - If a fire involving hazardous or mixed waste occurs
 - If any building, grass, forest, or nonhazardous waste fire exists that threatens to volatilize or ignite hazardous or mixed waste.
- Other Acts of Force Majeure (i.e., acts of God)
 - If an earthquake or other natural disaster threatens containment integrity, including precipitation that threatens to move spilled material off site.

E.3.2 Emergency Notification [20.4.1 NMAC § 264.56(a) and (b)]

Emergency notification requires immediate notification of 911 or the EM&R Office upon discovery of an imminent or actual incident involving hazardous and/or mixed waste. During nonworking hours, personnel will report all imminent or actual incidents involving hazardous and/or mixed waste to the Emergency Manager or the CAS operator at 667-6211. In the case of fire, notification of these individuals is superseded by the LANL fire alarm system. A fire is reported by dialing 911 (from telephone exchanges 667 and 665) or 667-7080 (from all exchanges, including cellular phones), activating automatic alarms, or activating a fire alarm pull box. All fire alarms alert the CAS operator, the LACFD, and PTLA, who in turn notify the Duty Emergency Manager.

Upon recognition of a hazardous or mixed waste emergency, the first arriving emergency-trained person will become the Facility Command Leader. Once the EM&R Office is notified of the emergency, the Duty Emergency Manager will proceed to the scene and be briefed by the Facility Command Leader, building/area personnel, and/or other emergency units/teams. The Emergency Manager will then assume the position of IC. If necessary, the IC may recommend that the EOC be activated and that the necessary members of the emergency management team be determined. The IC will form an ICS and contact the HMGS. The HMGS will notify the appropriate emergency response groups. The IC may determine from the list of response groups described in Table E-1 which groups to contact in an emergency. Each response group maintains an on-call person and/or a call-down procedure to respond to emergencies.

The EM&R Office will be notified of any potential hazardous or mixed waste emergency. The IC and the HMGS will use whatever means are available (including the assistance of other response groups, computer data searches, and sampling) to determine if a hazardous or mixed waste emergency exists.

E.3.3 Emergency Manager Actions [20.4.1 NMAC § 264.56(b-h)]

Upon notification of an emergency incident, the Duty Emergency Manager may:

- Make an initial assessment of the incident and, in conjunction with the IC, obtain resources to determine the source, quantities, and types of hazardous and/or mixed waste involved and the areal extent of any released materials.
- Request resources needed and have EOC staff begin notifications.
- Proceed directly to the scene.
- Assess the nature of the incident (e.g., through communication with the IC).
- Assume incident command after a direct briefing with the Facility Command Leader.
- Based on the guidelines in Section E.3.1 of this plan, determine if implementation of this plan is warranted.
- Activate the EOC, if necessary.

Upon deciding to implement this plan, the IC will, when appropriate:

- Assess the hazards to human health and the environment, including both direct and indirect effects, such as generation of toxic, irritating, or asphyxiating gases and/or hazards of runoff of water or chemicals used for fire suppression. An individual designated by the IC will use the guidelines in Section E.3.1 to assess the hazards to human health and the environment. If any of the criteria under Section E.3.1 are met and if the responsible Group Leader (or his/her designee) has not already accomplished evacuation of the area, the IC will initiate shelter in place or evacuation of the immediate area.
- Direct the EOC staff to initiate protective actions and immediately notify appropriate response groups and personnel as per the EM&R Guidelines. The IC may activate one or more of the following community alert mechanisms: the Community Alert (telephone) Network, the KRSN radio remote input system, or the cable television capture system, sitewide area network radios, and public radio and television channels.
- In the case of fire or release of any type, make reasonable efforts to confirm that all response personnel at the scene are aware of actual or imminent special hazards associated with hazardous or mixed waste.
- In emergency situations, contact the appropriate RRES representative to notify the New Mexico Environment Department (NMED) at (505) 827-9329 and the National Response Center at (800) 424-8802, reporting:
 - The name and telephone number of the RRES representative
 - The name and address of the facility
 - The time and type of incident
 - The name and quantity of material involved, to the extent known
 - The extent of injuries, if any
 - The possible hazards to human health or the environment outside the facility.
- When an emergency occurs at hazardous or mixed waste treatment units, ensure that appropriate LANL personnel monitor for leaks, pressure buildup, gas generation, or equipment ruptures.

Once control of the emergency is established, the IC will take all reasonable measures to minimize the occurrence, recurrence, or spread of fires, explosions, or releases. In addition, the IC will delegate cleanup and decontamination responsibilities to the Recovery Manager. These responsibilities may include:

- Arranging for site cleanup.
- Assisting with arrangements for proper handling of recovered waste, contaminated soil, or contaminated surface/groundwater.
- Assisting with arrangements for decontamination of equipment, as needed.
- Arranging for replacement and/or repair of equipment, as needed.

- Requesting that testing is conducted to verify successful cleanup.

Within 15 days of the incident, DOE National Nuclear Security Administration (NNSA) Los Alamos Site Office (LASO) will submit a report to the Secretary of the NMED. The contents of this report are generated by several LANL groups responding to the emergency, as detailed in Section E.11.

E.4 SPILLS [20.4.1 NMAC § 264.56(e)]

Sudden releases may include spills of hazardous or mixed waste that pose a significant threat to human health or the environment. Spill incidents resulting in a sudden release of hazardous or mixed waste that present a potential threat to human health or the environment, as listed in Section E.3.1, require implementation of this plan.

Hazardous and mixed wastes are stored on site at LANL in a variety of containers. Volumes of hazardous or mixed waste managed will vary from unit to unit. The general steps in handling hazardous and/or mixed waste spills are as follows:

- Isolate the immediate area and deny entry to all unauthorized personnel.
- Contain the spill by spreading sorbents or forming temporary dikes to prevent further migration (performed by properly trained personnel, if safe).
- Monitor the spill area and sample the spilled waste and contaminated media.
- Package the waste and contaminated media in sound containers.
- Decontaminate the area and all involved equipment and personnel (followed by testing to assure adequate cleanup).
- Remove the waste and contaminated media (performed by appropriate waste management personnel).

The IC will determine the steps to be taken for spill mitigation. If initial mitigation of the spill is necessary and can be accomplished safely (by appropriately trained personnel) before the Emergency Manager arrives, a qualified member of the affected area's operating group will serve as the Facility Command Leader.

Hazardous and/or mixed waste spills will be stabilized, if necessary, and cleaned up. During spill control and cleanup, all personnel will wear appropriate personal protective equipment (PPE).

Monitoring will be conducted to ensure that chemical and, as appropriate, radiological exposure is minimized. The collected material may be treated as hazardous or mixed waste, depending on the components present. Runoff from spills of listed hazardous or mixed waste that have migrated outside hazardous waste management areas must be contained and managed as hazardous or mixed waste, as appropriate. If the spill was from a characteristic hazardous or mixed waste and if it is determined that the runoff does not exhibit the characteristic (i.e., ignitability, corrosivity, reactivity, and/or toxicity), the runoff need not be managed as characteristic waste. Temporary dikes may be constructed to contain runoff.

E.4.1 Spill Control Procedures

When a flammable organic solvent spill, a highly acidic spill, or a highly caustic spill has been stabilized with the contents of an organic solvent spill kit, an acid spill kit, or a caustic spill kit, respectively, the resulting material may be sorbed using a nonbiodegradable sorbent. Nonbiodegradable sorbent can be used to control any spill if it is known to be compatible with the spilled material. Appropriate containers or packaging will be used to collect all spilled material and contaminated sorbent. Table E-1 of TA-specific permit applications, permit modification requests, or permit renewal applications lists emergency equipment available for spill control at specific units. The ultimate disposition of any contaminated sorbent or waste material will be determined by appropriate waste management personnel, according to hazardous waste management regulatory requirements.

E.4.1.1 Tank System Spill Control and Reporting

A tank system will be removed from service immediately using approved shutdown procedures if a leak or spill occurs from the tank system or its secondary containment system or if the system is determined to be unfit for use. Further addition of waste to the tank system or containment system will cease and the system will be visually inspected to determine the cause of the leak or spill. If a leak occurs from a tank system, as much of the waste as is necessary to prevent further release of waste will be removed within 24 hours after detection or as early as practicable, and the system will be inspected and repaired. All released waste will be removed within 24 hours or as soon as possible if a leak occurs to a tank's containment system.

If a spill from a tank is not immediately contained and cleaned up and exceeds a quantity of 1 pound, the release will be reported to the NMED within 24 hours of its detection in accordance with the requirements of 20.4.1 NMAC § 264.196(d)(1) [6-14-00]. In addition, a written report will be

submitted to the NMED within 30 days describing the likely migration route of the release; soil characteristics at the site; monitoring and sampling data relevant to the release; proximity to downgradient drinking water, surface water, and populated areas; and response actions taken or planned.

E.4.1.2 Tank System/Secondary Containment Repair and Closure

If the integrity of a tank system, including its secondary containment, has not been damaged by a spill, the system may be returned to service. Service may not resume until after all released waste is removed and repairs, if necessary, are made. Any tank system that cannot satisfy the criteria described above will undergo closure in accordance with the requirements of 20.4.1 NMAC § 264.197 [6-14-00].

E.4.1.3 Certification of Major Repairs

If a tank system undergoes extensive repairs (e.g., installation of an internal liner, tank system piping retrofit), the tank system will not be returned to service until a certification by an independent, qualified registered professional engineer is obtained, verifying that the repaired system is capable of handling wastes without release for the intended life of the system. This certification will be submitted to NMED within seven days after returning the tank system to use.

E.4.2 Decontamination Verification

Decontamination will be accomplished at the spill site. After the spilled material has been sorbed, the material will be containerized. If the spill occurs on a concrete or asphaltic-concrete area, water or an appropriate solvent will be used to clean the area. Liquids (i.e., spilled material and cleaning water or solvents used to clean a spill) may be sorbed with a compatible, nonbiodegradable sorbent and containerized. If a spill is from an identifiable source, the spilled material may be characterized as a newly-generated waste using acceptable knowledge or may be analyzed, as applicable, for the hazardous waste constituents known to be components of the waste managed at that unit. Analytical method(s) given in Table E-3 will be utilized, as appropriate. If the spill is from other than an identifiable source, the spilled material will be analyzed for the appropriate parameters listed in Table E-3. All personnel conducting decontamination verification will wear appropriate PPE. HSR-1 will conduct health physics monitoring whenever mixed waste is involved to ensure that radiation exposure is maintained as low as reasonably achievable. Any hazardous or mixed waste collected from decontamination activities will be handled appropriately.

In order to establish baseline data, a sample of decontamination water or solvent (and nonbiodegradable sorbent material, as applicable) will be taken prior to the start of the decontamination effort. A sample of the final washwater (or the used sorbent) will then be taken. The baseline samples and final washwater/used sorbent samples will be analyzed for the applicable parameters given in Table E-3. If the decontamination samples contain hazardous constituents that are not present in the baseline samples and the levels exceed established health-based levels, the decontamination procedure may be repeated. An alternative demonstration of decontamination may be proposed and justified to NMED, who will evaluate the proposed alternative in accordance with the standards and guidance currently in effect. If the proposed alternative is accepted, decontamination levels will meet the levels approved by NMED. Each sample will be collected with an appropriate sampling device (e.g., a thief or trier) as specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA, 1986), and approved updates, as applicable.

If a hazardous/mixed waste spill occurs on soil, any free liquid present will be collected and containerized. Liquids may be sorbed with a compatible nonbiodegradable sorbent prior to containerization. For such a spill, contaminated soil will either be excavated and containerized or remediated in situ. HSR-5 will conduct industrial hygiene monitoring and, if mixed waste is involved, HSR-1 will conduct health physics monitoring, if deemed necessary, to minimize exposure during soil removal or remediation operations. To establish comparative background data, one or more samples will be collected from an unaffected area near the spill site. The spill site will then be characterized, and the data will be compared to the background data to ensure that contaminated material from the spill has been removed or remediated.

If a hazardous/mixed waste spill occurs in an area with flooring, the floor will either be removed in lieu of decontamination, or the floor will be decontaminated. If the decision is made to decontaminate the floor, swipe samples or other types of sampling appropriate for the contaminant will be collected at random and characterized for decontamination verification. If, after several decontamination efforts, it is subsequently determined that the affected floor area cannot be decontaminated, the floor material will be removed. In all cases, wastes generated during the decontamination and/or removal process will be managed appropriately.

E.5 EXPLOSION

Explosions and resultant releases may result in a significant threat to human health or the environment. The potential exists for hazardous or mixed waste to be released during an

explosion. Implementation of this plan is required whenever a sudden release that cannot be contained or that presents a threat to human health or the environment occurs as a result of an explosion.

In the event of an explosion at LANL, all personnel will immediately evacuate the area. Any injured personnel will be decontaminated at the site, if required and if time allows. An LACFD ambulance will transport these personnel to LAMC for treatment. If an injury is severe and requires immediate medical evacuation, the injured person will be wrapped to contain contamination, if necessary. In the case of an actual or potential explosion, on-site personnel will contact the EM&R Office immediately so that the Emergency Manager can ensure that all necessary emergency response personnel are alerted. The LACFD is notified automatically upon central alarm system activation. The Emergency Manager assumes incident command and will remain near but at a safe distance from the site in order to inform personnel responding to the explosion of the known hazards.

If a fire results from an explosion, the LACFD Senior Officer will, upon arrival at the scene, evaluate all available information and determine the appropriate firefighting methods and tactics. The LACFD Senior Officer will direct firefighting operations as the acting IC until EM&R formally assumes command.

E.6 FIRE

Fires and resultant releases of hazardous or mixed waste may result in a significant threat to human health or the environment. Implementation of this plan is required whenever a fire incident results in a sudden release of hazardous or mixed waste that cannot be contained or that presents a threat to human health or the environment.

Fire alarms will be sounded automatically or manually to alert personnel that a fire hazard exists and to evacuate the area immediately if in the vicinity. Information related to the various fire alarms at the specific units is included in tables in Attachment E of TA-specific permit applications, permit modification requests, or permit renewal applications.

Depending on the size of the fire and the fuel source, portable fire extinguishers may be used. However, LANL policy does not encourage the use of portable fire extinguishers by employees unless they are properly trained. Instead, LANL policy encourages immediate evacuation of the area and notification of the CAS operator by dialing 911. For any fire, including a fire that involves

hazardous or mixed waste, the responsible Group Leader and the EM&R Office must be contacted immediately. The Emergency Manager will alert the LACFD and all other necessary emergency response personnel. If the fire spreads or increases in intensity, all personnel must follow protective actions as designated by the Emergency Manager. The Emergency Manager assumes incident command and will remain near the scene to advise personnel responding to the fire of the known hazards.

Upon arrival at the scene, the LACFD Senior Officer will evaluate all available information and determine the appropriate firefighting methods and tactics. The LACFD Senior Officer will direct firefighting operations as the acting IC until EM&R formally assumes command.

E.7 UNPLANNED NONSUDDEN RELEASES

Nonsudden releases include those incidents that, if uncontrolled, impact the environment over a long period of time. Such incidents include minor leaks from containers and loss of secondary containment integrity.

E.7.1 Responsibility

Appropriate LANL personnel are responsible for correction of a nonsudden release from a hazardous or mixed waste unit if the correction can be performed safely with normal maintenance and management procedures. Personnel from the EM&R Office may provide assistance in mitigating releases. Any correction methods for nonsudden releases that have resulted in an impact to the environment will be coordinated with the NMED.

E.7.2 Nonsudden Releases

In general, the response to a nonsudden release will be to contain the release, to correct the cause of the release, and to clean up any release to a level that protects human health and the environment.

Appropriate LANL personnel will conduct regularly scheduled inspections to detect failure of containment at the unit(s) addressed in TA-specific permit applications, permit modification requests, or permit renewal applications. Secondary containment systems will be inspected regularly to ensure that the integrity of the containment systems has not deteriorated. If an inspection reveals that containers are leaking or that secondary containment has deteriorated,

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LANL personnel will ensure that maintenance or replacement of containment is performed, as appropriate.

E.7.3 Nonsudden Release Surveillance

In addition to routine inspection and site-specific sampling and testing, LANL has established an area-wide environmental monitoring network maintained by RRES. Monitoring and sampling locations for various types of measurements are organized into three main groups. Regional monitoring stations located within the five counties surrounding Los Alamos County are placed up to 80 kilometers (50 miles) from LANL. These stations serve to determine background conditions. Perimeter stations, located within approximately 4 kilometers (2.5 miles) of the LANL boundary, document conditions in residential areas surrounding LANL. On-site stations, most of which are accessible only to employees during normal working hours, are within the LANL boundary.

Routine surveillance conducted at these stations includes measuring radiation and collecting samples of air particulates, surface waters, groundwater, soil, sediment, and foodstuffs for subsequent analysis. Additional samples provide information about particular events, such as major runoff events and nonroutine releases. Data from these efforts are used for comparison with standards, for determining background levels, and for radiation dose calculations.

E.8 EXPOSURE TO HAZARDOUS OR MIXED WASTE

If a person is exposed to hazardous or mixed waste, the affected person, a co-worker, or line management will notify the EM&R Office. Appropriate first aid should be administered immediately. An EM&R Office representative will make appropriate notifications as soon as possible so that exposure levels and decontamination requirements can be established. The affected person will then be transported to the HSR-2 medical facility or to LAMC for evaluation. If possible, the material involved in the exposure will be ascertained, and the information will be given to the medical staff.

Other potential exposures will necessitate evacuation of the area, if appropriate, or under any of the following conditions:

- Irritation of the eyes, breathing passages, or skin
- Difficulty in breathing
- Nausea, lightheadedness, vertigo, or blurred vision.

The affected person will be transferred to the HSR-2 medical facility or to LAMC. An HSR-1, HSR-5, or S-10 representative will attempt to ascertain what, if any, exposure occurred and what corrective measure is appropriate.

E.9 EVACUATION [20.4.1 NMAC § 264.52(f)]

A facility will be evacuated upon the voice command to evacuate the area or upon the sounding of the evacuation or fire alarm. The IC may call for sheltering in place when evacuation is impractical due to significant airborne hazards. Shelter in place may be possible in a designated area or in a building where all exterior windows and doors may be closed and outdoor air ventilation equipment turned off. Once the airborne hazard has decreased, personnel would then be evacuated.

E.9.1 Emergency Process Shutdown Prior To Evacuation

Personnel are instructed to shut down equipment prior to evacuating a building/area unless an immediate building/area evacuation is announced or signaled. To ensure efficient shutdown, training and exercises addressing the shutdown process are performed. In the case of an immediate evacuation, a selected team may shut down designated equipment in an evacuated area. The team will be equipped with proper equipment and PPE. If they are on location, HSR-1, HSR-5, and/or S-10 will provide advice and assistance. Process-shutdown procedures apply mainly to hazardous or mixed waste treatment units and are addressed, as appropriate, in Attachment E of TA-specific permit applications, permit modification requests, or permit renewal applications.

E.9.2 Evacuation Plan

Emergency situations may warrant the shutdown and evacuation of areas or buildings in order to protect personnel and property, to anticipate the emergency condition, or to enhance the appropriate response. Table E-4 lists the criteria for evacuation, persons responsible for initiating evacuations, and reentry conditions. Figures in Attachment E of TA-specific permit applications, permit modification requests, or permit renewal applications show evacuation routes and assembly/muster areas for specific hazardous and/or mixed waste management units.

To initiate the evacuation of a building/area, the evacuation or fire alarm is sounded and/or the public address (PA) system may be used. Evacuation alarms cannot be silenced and reset by site personnel. Only the Fire Alarm Maintenance Section and the LACFD Battalion Chief can silence and reset alarms. To evacuate a portion of a building or area, use of the PA system may be more

appropriate. The PA system will notify the occupants of the area to be evacuated and will advise personnel throughout the building of the existence of a problem in a specific area. Once evacuation has been initiated and if conditions allow, personnel will turn off all equipment that could contribute to the hazard if left unattended. All personnel will then proceed from the affected area to the assembly/muster area.

In the event of evacuation of a building, an outbuilding, or an outlying work area, the responsible Group Leader (or his/her designee) will determine a control point at the closest safe location (e.g., considering wind direction). The designated area will be outside the affected area and will serve as an assembly/muster area where the Group Leader (or designee) can oversee evacuation operations and work to prevent further spread of the hazard.

As personnel exit an affected building/area, a primary sweep of the building/area will be performed to ensure that all personnel have evacuated. If the building/area is evacuated, a Group Leader designee will take attendance at the assembly/muster area and report personnel accountability to the IC. The evacuation procedure is as follows:

- The person discovering the accident or emergency will call 911 to ensure that line management and the EM&R Office are notified.
- Site-specific BEPs and/or emergency action procedures will be followed concerning evacuation, sweep, personnel accountability, and equipment shutdown procedures.

A responsible on-site person may direct the initial evacuation and the central alarm system may be activated. The EM&R Office will be notified immediately and will dispatch the Duty Emergency Manager. A responsible on-site person may implement the evacuation process until the Duty Emergency Manager arrives at the scene to assume that responsibility.

E.10 SALVAGE AND CLEANUP [20.4.1 NMAC § 264.56(g) and (h)]

Appropriate representatives from the RRES groups will survey the affected area before salvage and cleanup begin. They will conduct visual inspections and sampling, as appropriate, of the affected area to determine whether cleanup is complete. If gases or fumes, electrical or radiological problems, or other conditions present a hazardous situation, personnel or selected teams equipped with proper PPE will reenter the area to perform designated decontamination tasks, repairs, and salvage to allow the return to normal operations. After an emergency, the IC will turn the operation over to a designated Recovery Manager, who will:

- Provide for proper handling of recovered waste, contaminated soil or surface water, or any other material that results from a spill, fire, or explosion. Contaminated material will be managed appropriately and temporarily stored at one of the hazardous or mixed waste storage areas at LANL. Waste management personnel will be responsible for determining the final disposition of the waste. This determination will be made in compliance with hazardous waste management regulations.
- Arrange to monitor for damage or improper operation of the unit and associated equipment as a result of the emergency or of plant shutdown in response to the emergency.
- Arrange for site cleanup procedures to be completed and ensure that no waste that may be incompatible with the released material is treated or stored in the same area.
- Ensure that emergency equipment is cleaned, decontaminated, and fit for its intended use before operations are resumed. Equipment will be inspected visually and then sampled, if necessary, to determine the type and degree of contamination and to determine appropriate cleanup measures.

Prior to resuming operations, the appropriate facility management at LANL will verify that the previously mentioned tasks have been performed. The owner/operator (DOE NNSA/LASO) will notify appropriate state and local authorities that cleanup procedures are completed and that emergency equipment is clean and fit for its intended use.

The IC assumes the coordination of post-emergency actions (particularly during the time period immediately following the emergency) until a Recovery Manager is appointed. The Recovery Manager then assumes this coordination role. The Recovery Manager is the functional equivalent of the Emergency Coordinator for post-emergency actions. The post-emergency actions include cleanup operations, vital equipment repair, or interim hazard-removal operations (such as arranging for demolition of unstable walls). The services of affected operational organizations, RRES groups, KSL, and other on-site resources will also be used to estimate cleanup costs and operational impact.

E.11 EMERGENCY RESPONSE RECORDS AND REPORTS [20.4.1 NMAC § 264.56(j)]

Any emergency that requires implementation of this plan will be documented by the Group Leader (or his/her designee) responsible for the hazardous or mixed waste unit associated with the emergency, and reported in writing within 15 days of the incident to the NMED. The incident report, submitted by DOE NNSA/LASO, will include the following data:

- Name, address, and phone number of owner or operator
- Name, address, and phone number of the facility
- Date, time, and type of incident (e.g. fire, explosion, spill)
- Name of material(s) involved
- Quantity of material(s) involved
- Extent of injuries (if any)
- Assessment of actual or potential hazards to human health or the environment
- Estimated quantity and disposition of material recovered from the incident.

In addition, LANL personnel responding to any emergency requiring implementation of this plan will record the date, time, location, and details of the incident. This information will be maintained in the facility operating record.

E.12 CONTINGENCY PLAN AMENDMENT [20.4.1 NMAC § 264.54]

This plan will be reviewed periodically by appropriate division personnel. The plan will be amended immediately if determined to be inadequate to handle releases (spills, explosions, and/or fires) and whenever:

- The facility permit is revised.
- There is change in the design or operation of the facility (e.g., quantities of waste handled and handling techniques) that increases the likelihood of an emergency and requires changes in emergency response.
- The Primary Emergency Manager changes.
- The list of emergency equipment changes significantly.

E.13 REFERENCES

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.

LANL, 2002, "Los Alamos National Laboratory Emergency Management Plan," LIR 403-00-01.0, Los Alamos National Laboratory, Emergency Management and Response Office, Los Alamos, New Mexico.

Table E-1

**Response Groups and Agencies Available to the
Emergency Management and Response Office for
Guidance and/or Emergency Assistance**

LANL ^a -Controlled Response Group	Telephone	Responsibilities
HSR-1, Health Physics Operations	667-7171	Provides routine guidance on radiological decontamination. Provides routine site evaluation and monitoring to determine the nature and extent of contamination (radiological).
HSR-2, Occupational Medicine	667-0660	Provides emergency medical treatment.
HSR-5, Industrial Hygiene and Safety	667-5231	Provides guidance on industrial hygiene equipment and operational safety. Provides routine site evaluation/support field testing to determine the nature and extent of contamination (chemical).
PS-7, Occurrence Reporting	667-0598	Reports occurrences and tracks follow-up actions.
S-10, Hazardous Materials Response	665-5237	Provides emergency site evaluation/field monitoring (chemical and radiological). Specifies protective clothing and equipment. Dispatches Hazardous Materials Response Team. Provides support for chemical, radiological, hazardous, and mixed waste incidents and decontamination of responders and response equipment.
RRES-MAQ, Meteorology & Air Quality	665-8855	Provides information on meteorological conditions.
RRES-WQH, Water Quality and Hydrology	665-1859	Provides information on hydrologic conditions.
RRES-SWRC, Solid Waste Regulatory Compliance	665-9527	Provides guidance on regulatory requirements. Provide guidance on proper treatment, storage, and off-site shipment of hazardous and mixed waste. Conducts field surveys to determine spread of contamination and adequacy of cleanup.
RRES-ECO, Ecology	665-8961	Provides information on biotic conditions.
PTLA, Protection Technology Los Alamos	667-4531	Provides traffic control and security.
KSL ^b	662-9080	Dispatches maintenance personnel and equipment. Assists in waste cleanup under the direction of the Recovery Manager.
NMT, Nuclear Materials Technology Division	667-2556	Provides initial emergency site evaluation at Technical Area (TA) 55 and conducts activities related to the prevention, notification, and control of emergencies at TA-55. In the event of an emergency at TA-55, monitors for leaks, pressure buildup, gas generation, or equipment ruptures, if necessary. Maintains and operates TA-55 Emergency Response Team. Writes TA-55 emergency plans and procedures.
DX, Dynamic Experimentation Division	667-5653	Provides information and/or assistance during emergencies involving units at TA-14, TA-15, TA-36, and TA-39.

Table E-1 (Continued)

**Response Groups and Agencies Available to the
Emergency Management and Response Office for
Guidance and/or Emergency Assistance**

LANL ^a -Controlled Response Group	Telephone	Responsibilities
ESA, Engineering Sciences and Applications Division	667-4136	Provides information and/or assistance during emergencies involving units at TA- 16.
Los Alamos County Fire Department	911 662-8301	Dispatches firefighting personnel and equipment and provides Emergency Medical Services.
Los Alamos County Police Department	662-8222	Provides traffic control on public access roads.
Los Alamos Medical Center ^c	662-4201	Provides medical services. Provides and maintains Emergency Room.

^a Los Alamos National Laboratory.

^b KBR-Shaw-LATA.

^c Medical services related to hazardous and mixed waste injuries are provided under the direction of HSR-2.

Table E-2

Los Alamos National Laboratory-Wide Emergency Equipment

Hazardous Materials (HAZMAT) Vehicles and Associated Emergency Equipment:

HAZMAT vehicles and trailers are located at Technical Area (TA) 64, Building 39 (TA-64-39). They are available to the Security and Safeguards (S) Hazardous Materials Response Group (S-10) for emergency response to all of the TAs at Los Alamos National Laboratory (LANL). S-10 is responsible for maintaining the supplies of appropriate emergency equipment in each vehicle and trailer.

The HAZMAT vehicles and trailers are equipped with safety and emergency equipment, personal protective clothing, and other supplies, which may include, but are not limited to, some or all of the following:

- Assorted personal protective equipment, T-shirts, and gloves
- Safety goggles, safety glasses, and face shields
- Boots and booties
- Totally encapsulating suits and boots
- Level A and B suits
- Flash suits
- Self-contained breathing apparatus (SCBA) and SCBA bottles
- Respirators and cartridges
- Hazardous chemical reference books and other reference materials
- Shovels
- Siphon pumps
- Assorted spill kits and sorbents
- Neutralizing solutions: acids, bases, and caustics
- Two-way radios, cellular phones, facsimile, and other communication equipment
- Bottles of leak detector and leak repair kits
- Emergency repair packs
- HAZMAT bags
- Gas detectors and chemical monitoring equipment
- Radiological monitoring equipment
- Sponges and cleaners
- Warning signs and barricade tape
- Traffic control barriers
- Flashlights
- Cameras and film
- Knives
- Portable power supplies
- Warning and signal horns
- Harnesses and belts
- Decontamination equipment
- Sampling equipment
- Lifting equipment and vetter bags
- Assorted tools, tape, and other supplies
- Non-sparking tools
- Biological detection equipment
- Chemical vacuums
- Sandia foam
- Plugging and diking equipment
- Sample van equipped with a glovebox and analysis equipment
- Environmental continuous air monitoring equipment
- Robot
- National Atmospheric Release Advisory Center-Internet Client (NARAC iClient)

Table E-2 (Continued)

Los Alamos National Laboratory-Wide Emergency Equipment

Hazardous Materials (HAZMAT) Vehicles and Associated Emergency Equipment:

Hotspot plume modeling program
Mass decontamination trailer with tent and supplies
Portable decontamination trailer
Portable structures
Tents
Trucks
Trailers
International Shipping Units
Portable hot water heater
Forklift
Automated external defibrillators.

Table E-2 (Continued)

Los Alamos National Laboratory-Wide Emergency Equipment

Supplemental emergency equipment and personnel available from the Los Alamos County Fire Department (LACFD):

Supplemental emergency equipment available from the LACFD may include, but is not limited to, some or all of the following:

- Fire engines
- Mini-tankers with compressed air foam capability
- Modular ambulances
- Rescue vehicles
- Crash-Fire-Rescue (CFR) unit
- Water tankers with compressed air foam capability
- Incident Command vehicles
- SCBA units
- SCBA air tanks
- Remote air system for confined space rescue
- Ladder truck with pump
- Personnel with Hazardous Material First Response Operational Level training
- Personnel with Basic Emergency Medical Technician training
- Personnel with Advanced Life Support training

Table E-2 (Continued)

Los Alamos National Laboratory-Wide Emergency Equipment

Supplemental emergency equipment and personnel available from KBR-Shaw-LATA (KSL):

Supplemental emergency equipment available from KSL may include, but is not limited to, some or all of the following:

TRANSPORTATION EQUIPMENT:

Pickups, 1/2 through 3/4 ton
Trucks, 1 through 3 ton
Vans, panels, and carryalls
Buses

SPECIAL EQUIPMENT:

Graders
Loaders
Snowplows and snow blowers
Bulldozers
Scrapers
Semitrailers
Chain saws
Street flushers
Mobile transceivers
Generators
Handsets (2-way)
Pageboys (1-way)
Welders
Mobile site logistics support equipment/associated heavy equipment
Fully equipped spill response unit
Utilities equipment and emergency utility support
Fuel trucks
Light banks
Dump trucks
Backhoes
Potable water trucks
Cranes
Forklifts

TRAINED PERSONNEL:

Heavy equipment operators
Dispatchers
Mechanics
Power saw operators
Radio and telephone operators
Truck drivers
Rodent/Pest Control personnel
HAZMAT response/cleanup personnel
Welders
Electricians

Table E-2 (Continued)

Los Alamos National Laboratory-Wide Emergency Equipment

Table E-2 (Continued)

Los Alamos National Laboratory-Wide Emergency Equipment

Emergency equipment and personnel at the Occupational Medicine Clinic, Occupational Medicine Group (HSR-2):

At TA-3 (SM-409) Central Clinic:

Emergency equipment and supplies available from HSR-2 may include, but are not limited to, some or all of the following:

PERSONNEL:

- Physicians
- Physician's Assistants
- Nurses
- X-ray Technician
- Clinical Laboratory Technicians
- Clinical Testing Technicians
- Clinical Psychologist
- Counselors

SPECIAL EQUIPMENT-PORTABLE:

- Multichannel emergency receiver-base station
- Two-way radio on the State Med Net, the LANL Emergency Management channel, and the LANL Health-Safety Net
- Cardiac monitors and defibrillators
- Crash cart emergency equipment with E-tank oxygen (O₂)
- Portable physicians' bag with medications
- Portable suction unit
- Portable stretchers (ambulance, gurney, folding)
- Wheelchairs
- O₂ tanks
- Manual resuscitators
- Intravenous (IV) stands
- IV solutions
- Otoscopes/ophthalmoscopes
- Portable sphygmomanometers
- Stethoscopes
- Anticontamination apparel
- Eye irrigation solution
- First-aid kits
- Extrication and cervical collars, crutches, canes
- Suture sets
- Protective apparel
- Morgan lens irrigation sets
- Decontamination equipment (portable)

Table E-2 (Continued)

Los Alamos National Laboratory-Wide Emergency Equipment

Emergency equipment and personnel at the Occupational Medicine Clinic, HSR-2 (Continued):

At TA-3 (SM-409) Central Clinic (continued):

SUPPLIES-GENERAL:

Bedding/pillows
Rescue blankets
Burn blankets
Thermal/icing pouches
Multitrauma dressings, surgical and first aid supplies
Disposable ice bags

SPECIAL FACILITIES - NONPORTABLE:

Fully equipped decontamination room at the Occupational Medicine Clinic
Completely equipped emergency room with ambulance entrance
Emergency lighting system
Complete X-ray suite
Protective clothing and wound counters
12-lead electrocardiograph
Fully equipped crash cart with Life Pak defibrillator/external pacer, intubation equipment, emergency medications
Fully equipped decontamination room at Los Alamos Medical Center (LAMC) adjacent to the LAMC emergency room

TRANSPORTATION:

Full ambulance service is available within minutes to the central facility.

COMMUNICATION:

Base station on State Medical Net and Los Alamos County Fire Department trunked radio system.

Table E-3
 Waste Analysis Parameters and Test Methods^a

Parameter	Test Method	Reference ^b
Ignitability	Pensky-Martens closed-cup method Setaflash closed-cup method Ignitability of solids	(L, S) SW1010, SW1020A (S) SW1030 (L, S) ASTM D93-02a
Reactivity	Test method to determine hydrogen cyanide released from waste Test method to determine hydrogen sulfide released from waste	(L, S) SW, Section 7.3
Corrosivity	Electrometric (pH of aqueous solution)	(L) SW9040B
Toxicity characteristic (TC)	Toxicity characteristic leaching procedure (TCLP) extraction	(S) SW1311
TC Metals:	Graphite furnace atomic absorption (AA) spectroscopy, gaseous hydride AA, or direct aspiration AA, manual cold-vapor technique	(L, S) SW7060A, SW7061A (L, S) SW7080A, SW7081 (L, S) SW7130, SW7131A (L, S) SW7190, SW7191 (L, S) SW7420, SW7421 (L, S) SW7740, SW7741A (L, S) SW7760A, SW7761 (L) SW7470A, (S) SW7471A
Arsenic		
Barium		
Cadmium		
Chromium		
Lead		
Selenium		
Silver		
Mercury	Manual cold-vapor technique	(L, S) SW8260B
Volatile organics	Gas chromatography (GC)/mass spectrometry (MS) GC/MS capillary column technique	(L, S) SW8270C ^c (S) SW8275A
Semivolatile organics	GC/MS GC/MS capillary column technique	(L, S) SW8081A
Organochlorine pesticides	Thermal extraction/GC/MS	(L, S) SW8151A
Chlorinated herbicides	GC	(L, S) SW8151A
Cyanide, free and total	Distillation and colorimetric ultraviolet	(L, S) SW9010B, SW9012A
Total chromium	Colorimetric method for hexavalent chromium	(L, S) SW7196A
Sulfide	Colorimetric titration	(L, S) SW9030B

Table E-3 (Continued)
 Waste Analysis Parameters and Test Methods^a

Parameter	Test Method	Reference ^b
Total RCRA metals ^{c,d}	Acid digestion Inductively coupled plasma atomic emission spectroscopy	(L) SW3010A, (S) SW3050B (L, S) SW6010B
Arsenic		(L, S) SW6010B
Barium		(L, S) SW6010B
Cadmium		(L, S) SW6010B
Chromium		(L, S) SW6010B
Lead		(L, S) SW6010B
Selenium		(L, S) SW6010B
Silver		(L, S) SW6010B
Mercury	Manual cold-vapor technique	(L) SW7470A, (S) SW7471A
Free liquids	Paint Filter Liquids Test	(L, S) SW9095A

^a At Los Alamos National Laboratory, current analytical capabilities include limited analyses of mixed waste samples. These analyses include gross alpha, beta, and gamma screening.

^b "A" (e.g., A006) refers to U.S. Environmental Protection Agency, 1984, "Sampling and Analysis Methods for Hazardous Waste Combustion," EPA-600/8-84-002.

"ASTM" refers to American Society for Testing and Materials standards.

"SW" refers to U.S. Environmental Protection Agency, 1986 and all approved updates, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846.

(L) refers to liquid waste.

(S) refers to solid waste.

^c See also atomic absorption methods. Total metals may be substituted for TCLP metals, if appropriate.

^d RCRA = Resource Conservation and Recovery Act.

Table E-4

Evacuation Determination and Reentry Conditions

Reason for Evacuation	Evacuation Determination Made by	Reentry Conditions ^a
Fire	¹ Fire or evacuation alarm, Group Leader or alternate, Lead Engineer, Senior Staff Member present, Senior Technician, or Emergency Manager	Following survey by the person designated by the IC ^b
Explosion	Same as 1 above	Same as above
Loss of ventilation	² Group Leader or alternate, Senior Staff Member, Lead Engineer, or Senior Technician	Same as above
Loss of electric power	Same as 2 above	Same as above
Extensive contamination	Same as 2 above or HSR-1 ^c Representative	Same as above
Airborne contamination	Same as 2 above or Radiation Monitor	Same as above
Escape or release of toxic or hazardous gas or fumes	Group Leader or alternate, Senior Staff Member, Lead Engineer, Senior Technician, or Emergency Manager	Same as above
Bomb or bomb threat	EM&R ^d or PTLA ^e representative, R&D ^f Section Leader or alternate, Senior Staff Member, or Lead Engineer	Same as above

^a All reentries are authorized by the EM&R Incident Commander.

^b "IC" refers to the Incident Commander as defined in 29 CFR § 1910.120.

^c "HSR-1" refers to the Health Physics Operations Group.

^d "EM&R" refers to the Emergency Management and Response Office.

^e "PTLA" refers to Protection Technology Los Alamos.

^f "R&D" refers to the Research and Development Section.

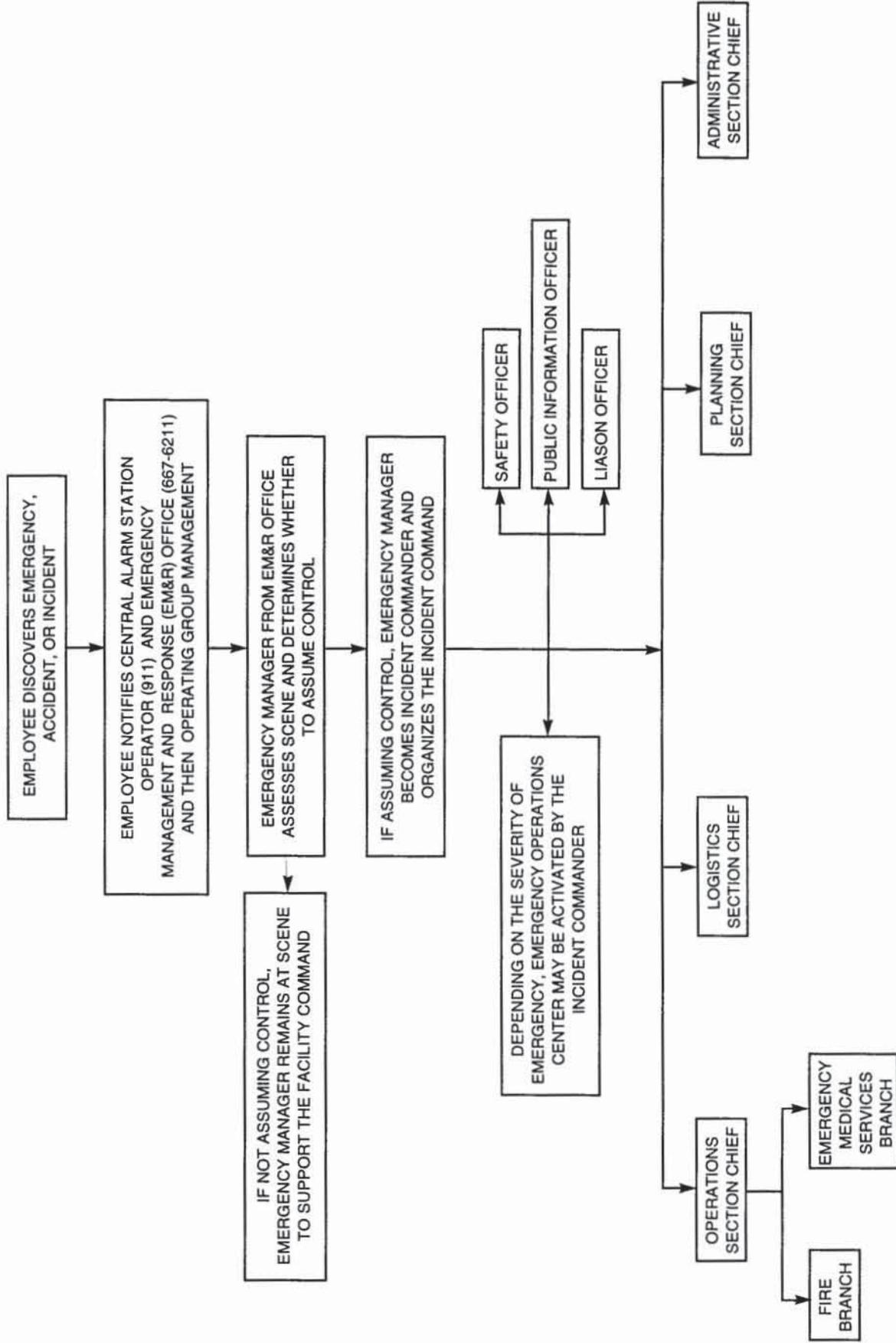


Figure E-1

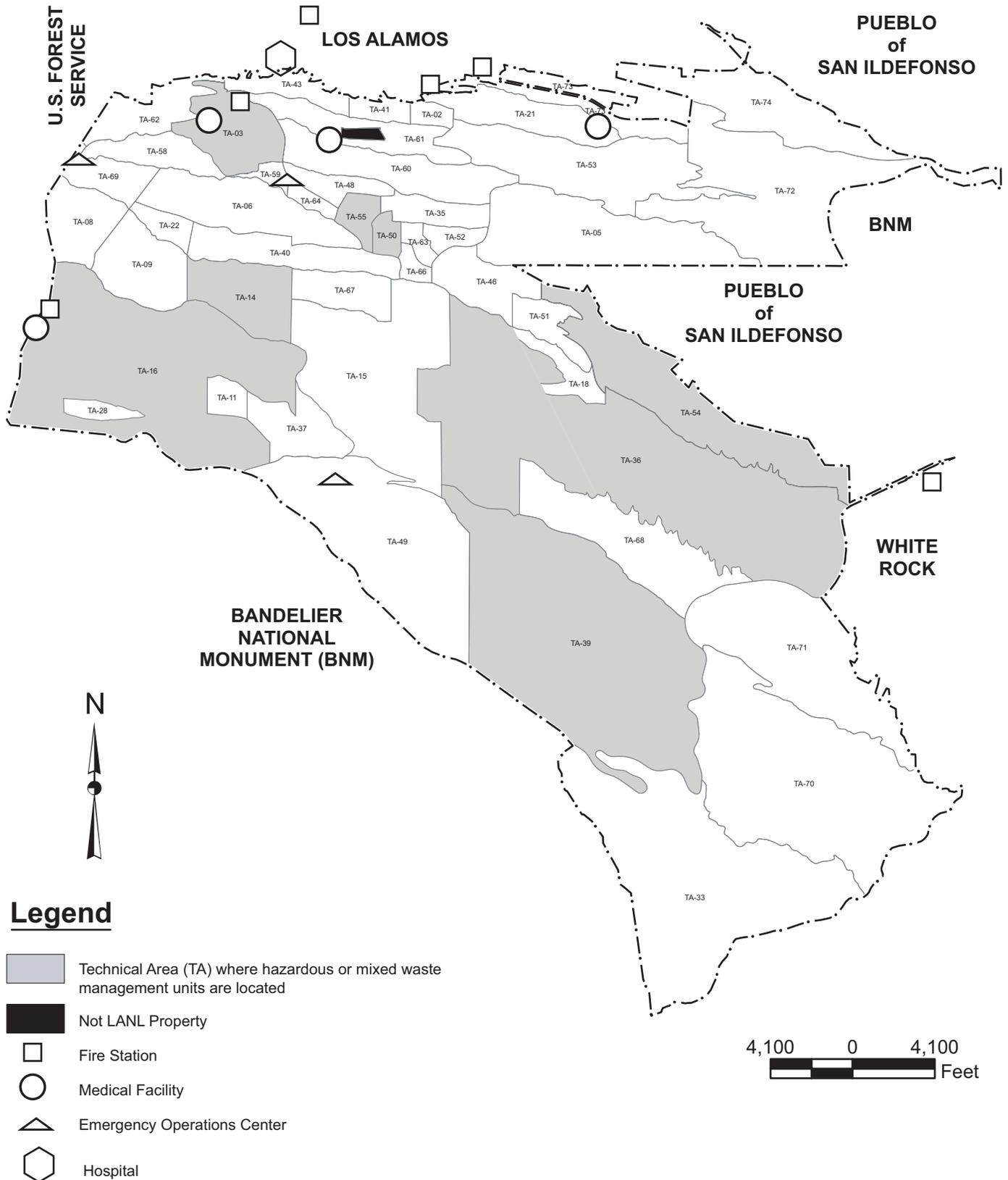


Figure E-2

Emergency Facilities

State Plane Coordinate System New Mexico Central Zone North American Datum 1983 (ft)

TABLE D-2
EMERGENCY MANAGEMENT AND RESPONSE OFFICE
EMERGENCY MANAGERS^a

Emergency Managers	Laboratory Telephone	Home Telephone	Home Address
^b Brenda Andersen	667-6211	662-4173	3926 A Alabama, Los Alamos, NM
Manny L'Esperance	667-6211	455-9138	13 Paseo Patron, Santa Fe, NM
Joe Boyet	667-6211	753-6108 412-9997	125 Private Rd. 1153, Espanola, NM

^a To ensure immediate response, the Emergency Manager may be reached at the Emergency Management and Response Office (667-6211 or after hours, 667-7080).

^b Primary contact