463 Permit (TA-21, Permit)

SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN

STEAM PLANT
TA-21-357

Los Alamos National Laboratory

Los Alamos, New Mexico

Prepared By:
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In conjunction with
Los Alamos National Laboratory
Water Quality and Hydrology Group (ESH-18)

Revision 1: February 2002

Table of Contents

Acronyms

API	American Petroleum Institute
AST	Aboveground storage tank
CFR	Code of Federal Regulations
EDS	Employee Development System
EM&R	Emergency Management & Response
EPA	U.S. Environmental Protection Agency
ES&H	Environment, Safety, and Health - a Lab division
ESH-18	LANL Water Quality & Hydrology Group
FM	Facility Manager
FMD	Facility Manager Designee
FMU	Facility Management Unit
FWO	Facility Waste Operations a Lab division
HENV	JCNNM Environmental Branch
JCNNM	Johnson Controls Northern New Mexico
Laboratory	Los Alamos National Laboratory
LANL	Los Alamos National Laboratory
PE	Professional Engineer
SPCC	Spill Prevention Control and Countermeasure
SWPP	Storm Water Pollution Prevention
TA-21	Technical Area 21
U.S.	United States
UESB	Utilities, Electric and Steam Utilities Branch of JCNNM
UI	Utilities and Infrastructure
UOI	Utility Operating Instruction

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 and being familiar with the provisions of this regulation, attests that this Plan has been prepared in accordance with good engineering practices.

Certified by: _____ Date: 2/27/02

Paul Parker
Registered Professional Engineer
Facility Engineer/Branch Manager
JCNNM Utilities, Electric and Steam Branch, Los Alamos National Laboratory

Management Approval

In accordance with 40 CFR Part 112.7, this Plan has the full approval of management at a level with authority to commit the necessary resources.

Facility Owner Approval:

Approved by: _____ Date: 2/27/02

David Padilla
FWO-UI Facility Manager
Los Alamos National Laboratory

Facility Operator Approval:

Approved by: _____ Date: 2/27/02

Gary Blauert
Director of Institutional Operations
Johnson Controls Northern New Mexico

SPILL PREVENTION CONTROL AND COUNTERMEASURE COMPLIANCE INSPECTION PLAN REVIEW PAGE

In accordance with 40 CFR Part 112.5(b), a review and evaluation of this SPCC Plan is conducted at least once every three years. As a result of this review and evaluation, the SPCC Plan will be amended within six months of the review to include more effective prevention and control technology if: (1) such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field proven at the time of review. Any amendment to the SPCC Plan shall be certified by a Professional Engineer within six months after a change in the facility design, construction, operation, or maintenance occurs which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines.

Review Dates	Signature	Name	Title	Amended & Stamped (yes/no)
2/27/02		David R. Padilla	FMU&S Facility Manager	Original

1. INTRODUCTION

The Spill Prevention Control and Countermeasure (SPCC) Plan is a requirement of the Oil Pollution Prevention Regulation, 40 Code of Federal Regulations (CFR) Part 112. Its intent 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.

This SPCC Plan addresses the 53,000-gallon-capacity aboveground storage tank (AST) designated as structure 21-57-AST, which stores No. 2 fuel oil at LANL's Steam Plant, at Technical Area 21 (TA-21). The TA-21 Steam Plant is operated for LANL by the Johnson Controls Northern New Mexico (JCNNM),Utilities, Electric and Steam Branch (UESB). The Steam Plant is part of the Laboratory's FMU #80. Under the direction of the FMU 80 Facility Manager, JCNNM UESB is responsible for preparing and implementing an SPCC plan addressing the TA-21 Steam Plant.

The Plan has been developed to meet regulatory requirements under the jurisdiction of the U.S. Environmental Protection Agency (EPA).

1.1. Facility Description

The TA-21 Steam Plant provides space and process heating for TA-21 at LANL. The TA-21 Steam Plant is located within TA-21. Natural gas is the primary fuel supply for the steam plant, with #2 Fuel Oil (also called diesel) used for backup fuel and emergency standby power generation. The plant consists of three dual-fuel boilers each rated at 300 boiler horsepower of steam per hour, operating on a common 100 psig, 335-degree Farenheit steam header. The boilers are operated on No. 2 fuel oil when natural gas is not available. The No. 2 fuel oil is stored directly north of building 21-357 in a 53,000-gallon aboveground storage tank designated as structure 21-57. The tank is typically not filled to capacity and at the time this plan was written the aboveground storage tank (AST) contained 260 gallons. All boilers and pumps are located inside Bldg. 21-357.

Fuel is transferred into the AST truck tanker transfer area by pumps housed in Building 21-57, which is directly west of the AST. Oil is transferred to the boilers via underground piping from the east side of the tank, then south and turning west adjacent to Bldg. 21-357 and into a concrete pit where the piping enters the building. Building 21-357 is located on the south side of DP Mesa. Storm water drains into Los Alamos Canyon, which is a tributary to the Rio Grande River approximately 12 miles away.

Approximately 50 feet of the underground supply and return lines between AST 57 valve pit south toward Bldg. 21-357 up to the 90 degree bend was replaced in 1990 due to a leak. The amount that leaked is unknown.

No. 2 fuel oil is stored in the 600 gallon AST on the west side of Bldg. 21-357. This AST supplies the back-up generator also located in Bldg. 21-357.

The TA-21 Steam Plant is operated for the Laboratory by the JCNNM Utilities, Electric and Steam Branch. The plant is operated continuously by four operating Engineers, one on each of a rotating shift. The shift rotation cycle is of four weeks duration. The plant also utilizes a relief operator for maintenance of equipment and for sick and vacation relief (Utilities Operating Instructions, UOI No. 66-10-050, 2-13-89).

The TA-21 Steam Plant is under the management of the Laboratory's Facility Management Unit #80. A map in Appendix G shows the TA-21 Steam Plant, storm water drainage areas, direction of storm water flow, SPCC locations, and other areas of concern.

This facility is classified under the SPCC regulations as a bulk storage facility. This is not a tank car or tank truck loading and unloading facility.

1.2. Facility Owner & Operator

The Facility Owner of the TA-21 Steam Plant is the Facility and Waste Operations (FWO) - Utilities and Infrastructure (UI) Facility Manager. FWO-UI is the agent of the owning division director responsible for the management and administration of FMU 80. As such, the Facility Manager is responsible for safely operating the facilities and for providing responsive and reliable facilities and services to support tenants' operational responsibilities.

The facility tenant operator is currently JCNNM. JCNNM has accepted, with the approval of the Facility Manager, responsibility for implementation and maintenance of the TA-21 Steam Plant SPCC Plan. If for any reason JCNNM will not continue to manage the SPCC Plan, a memorandum of understanding will be developed between the operating tenant group/division and the Facility Manager to establish roles and responsibilities associated with the Plan, and the Plan will be properly amended to reflect such action.

Operating Group and facility contacts are listed in Appendix E and will be updated as necessary.
The Steam Plant has identified a committee of individuals responsible for development, implementation, maintenance and revision of the Steam Plant's SPCC. These individual members understand that part of their responsibility is to be knowledgeable about spill control and prevention matters. The committee includes the following members:

1. Paul Parker - Facility Engineer/Branch Manager
2. Joe Ortiz - Spill Coordinator
3. Robert Montano - Building Manager
4. Tim Zimmerly - Storm Water Pollution Prevention/Spill Prevention Control and Countermeasures Plans Coordinator – JCNNM Environmental Branch (HENV)
5. Eric Martinez - Building 21-357 Foreman
6. Jerome Gonzales - FWO-UI representative

Effective organization of the Spill Control Committee is important in order for the team to be able to accomplish the task of developing and implementing this plan. To ensure that this plan remains effective, the HENV Storm Water Pollution Prevention (SWPP)/SPCC Coordinator must be aware of any changes that are made in plant operations to determine if any changes must be made.

1.3. Spill History

In 1990(approx) the underground lines from AST 57 to the Bldg. 357 the line was found to have been leaking thru visible staining on the ground. The line was excavated, replaced with wrapped. The amount that spilled is unknown.
On February 15, 2002 as a result of work order to investigate why fuel was not able to flow through the pumps inside Bldg. 357 to operate the boilers, the AST was measured and the tank had 260 gallons. An investigation is currently ongoing to determine a discrepancy in the quantity of oil used and measurement errors. As the underground piping was excavated to examine for potential leaks, a small leak was found along a portion of the supply line adjacent to Bldg. 357. Investigations are being conducted to determine the extent and magnitude of the spill.

1.4. Potential Spill Predictions

Items within the TA-21 Steam Plant that possess a spill potential due to equipment failure include the 53,000-gallon AST, surge tank, pump station and associated piping, tank transfer area, and 600-gallon AST (Day Tank). Predictions of discharge quantities and flow directions for each follow.

<u>53,000-gallon AST</u>

Quantity: Although unlikely, the maximum potential discharge of this AST is 53,000 gallons.

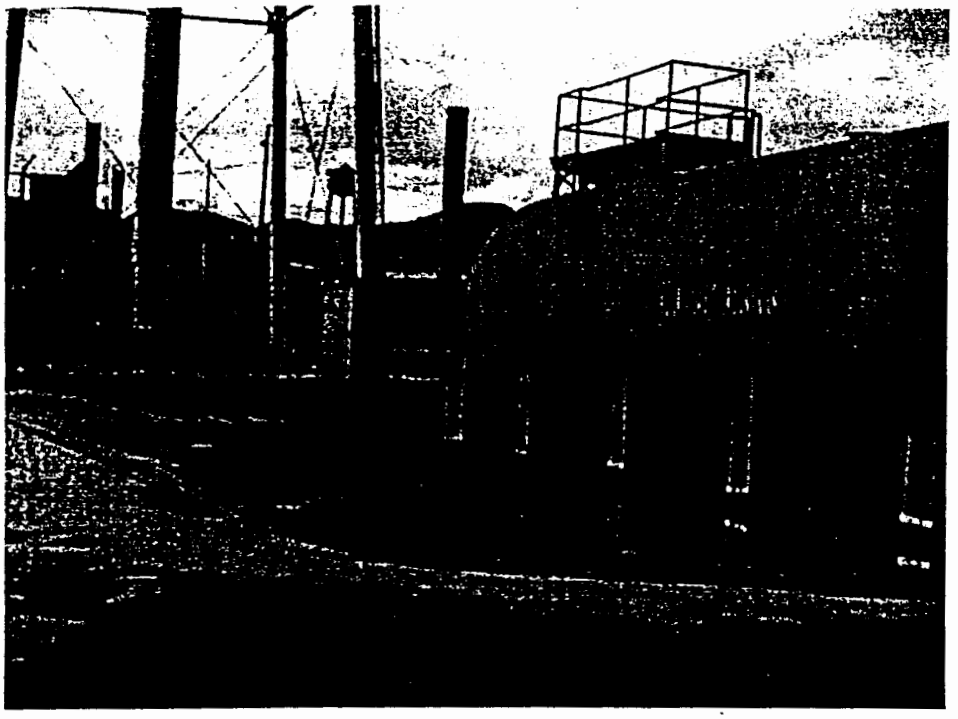
Direction: A release from this AST would be contained by the 88,671-gallon Hypion lined earthen berm, which surrounds the AST, and is sufficiently impervious to contain spilled oil. The unit would contain the entire contents of the AST (see Photograph 1).

Surge tank (Not Used since most tankers have PTOs)

Quantity: Although unlikely, the maximum potential discharge of this AST is 3,000 gallons.

Direction: A release from the surge tank would flow into the 88,671-gallon lined earthen berm secondary containment unit in which it resides. The unit would contain the entire contents of the AST (see Photograph 2).

Photograph 1 - 53,000-Gallon No. 2 fuel oil AST



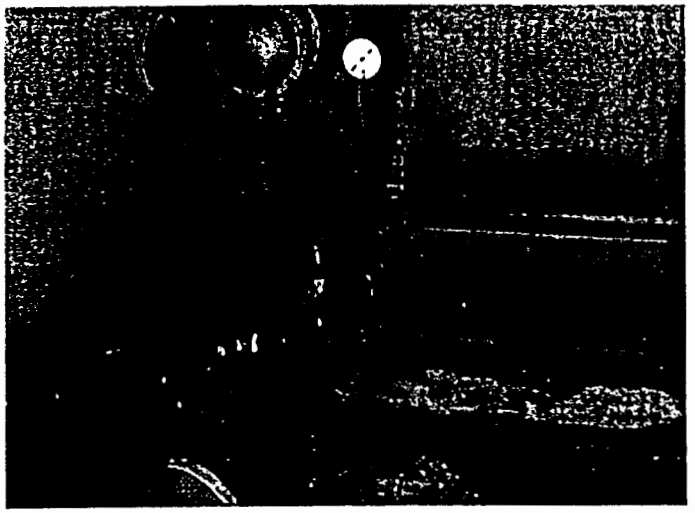
Photograph 2 - Surge Tank

Pumping Station and Associated Piping

Quantity: A rupture or leak in the piping between the truck transfer area and the pump station (Building 42, see Photographs 3 and 4) could discharge less than 100 gallons. A rupture or leak inside the pump house would amount to 78 gallons. This includes the volume inside the 113-ft length of pipe from the tank transfer area into the pump house. Isolation valves are in the closed position and opened only when refilling the tank. In addition, fueling transfer operations are required to be monitored continuously by the plant operator and tanker truck driver during the process.

Direction: Releases in piping between the pump house and the AST would be contained by the lined earthen berm secondary containment unit. The pump house is located outside the secondary containment and has isolation valves inside the house. Since the pipe is gravity assisted from the transfer area to the pump house, the volume in the pipe could potentially empty into the pump house if a rupture at the valves or piping in the pump house occurred. If fuel escaped the pump house, it would flow south into a storm drain that discharges into Los Alamos Canyon. Plans have been discussed to extend the secondary containment around the house and capture any potential spills into the lined earthen berm secondary containment or remove the pump house, surge tank and reconfigure the fill line.

Photograph 3 - Pump House Isolation Valves



Photograph 4 - Pump House Building 42

Underground Piping from AST 57 to Bldg.357

Quantity: A rupture or leak in the piping could discharge the entire contents of AST 57 approximately 53,000 gallons.

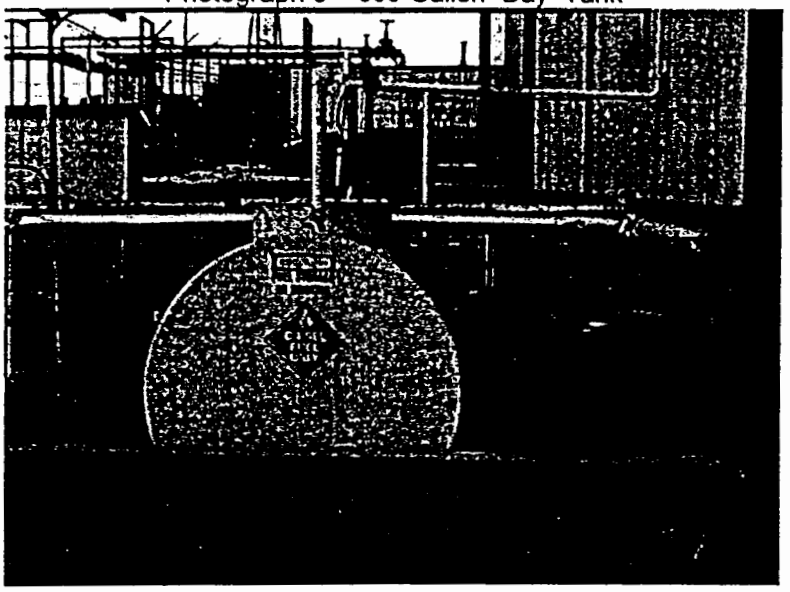
Direction: The flow would be in the soil and could potentially reach Los Alamos Canyon.

600-Gallon No. 2 fuel oil AST for Backup Generator (Day Tank)

Quantity: Although unlikely, the maximum potential discharge of this AST is 600 gallons.

Direction: A release from this AST would be contained by the 1,100-gallon concrete secondary containment unit, which surrounds this AST. The secondary containment would hold the entire contents of this AST (see Photograph 5).

Photograph 5 – 600-Gallon "Day" Tank

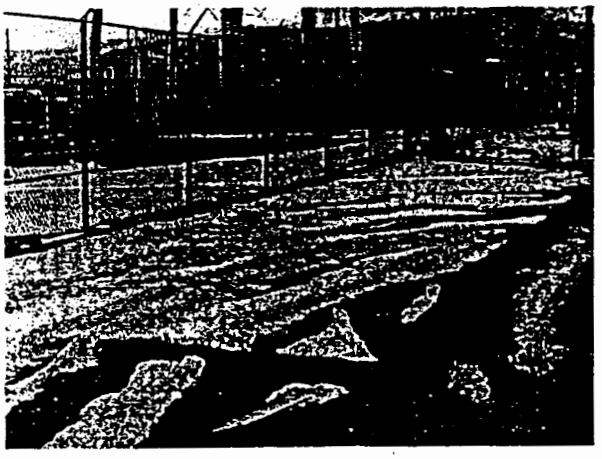


Tank Truck Transfer Area

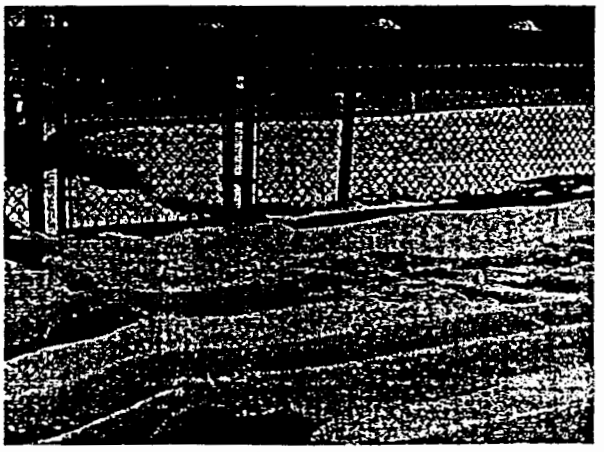
Quantity: Should a leak or spill occur during filling of AST 57, a discharge of up to 20 gallons would occur.

Direction: The flow from a spill would be captured by the asphalt berm, which directs flow into the 88,671-gallon lined earthen berm secondary containment (see Photographs 6 and 7).

Photograph 6 - Asphalt Berm Around Truck Transfer Area



Photograph 7 - Asphalt Swale Into Lined Secondary Containment



2. STORAGE TANKS AND CONTAINMENT STRUCTURES

To prevent discharged oil from reaching a navigable water of the U.S., appropriate storage tanks and containment structures, and ancillary equipment and management procedures are in place at the TA-21 Steam Plant. The following sections address items associated with the storage tanks and containment structures including facility drainage, storage tank descriptions, secondary containment and its drainage, integrity testing, fail-safe engineering, and transfer operations.

2.1. Facility Drainage and Storm Water Considerations

Each of the two tanks at the TA-21 Steam Plant have adequate secondary containment that are protected from storm water run-on and run-off but capture direct rainfall, as they are not covered. Storm water drainage from both secondary containment structures will occur infrequently. There are valves for draining the secondary containment structures, and accumulations are typically left to evaporate. Valves are locked to prevent accidental discharges. When a substantial amount of water has accumulated, it can be released through valves located south of the berm and concrete secondary. Discharge operations will be conducted as described in Section 2.4.

Storm water accumulations and discharges from the SPCC secondary containment areas follow procedures that minimize the potential for pollution, as documented in the JCNNM Health and Safety Manual procedure, *Stormwater Discharges from Secondary Containment*. These procedures include notification, inspection, and approval prior to discharge.

Discharge operations will be conducted as described in Section 2.4.

2.2. Storage Tank Description

The 53,000-gallon No. 2 fuel oil tank 21-57-AST is located north of Building 357 in a hyplon lined earthen berm. The capacity of the earthen berm is approximately 88,671 gallons, and would provide adequate containment in the case of a catastrophic failure of this tank. The tank is not typically filled to capacity. A drain valve on the tanks west side shall be capped and locked. Underground piping carries fuel oil from the tank into bldg. 357 to the boilers by the use of pumps. During non-operation the supply valve shall be closed and locked. A return line is also underground and is used to carry oil not used back to the tank. An investigation is currently ongoing to determine a discrepancy in the quantity of oil used and measurement errors. A small spill was found along a portion of the supply line adjacent to Bldg. 357. Investigations are being conducted to determine the extent and magnitude of the spill. Plans are also in place to either replace the underground piping with dual wall pipe or place it above ground. If the piping is to be replaced and left underground the valves shall be closed and locked to prevent potential large volume leaks from the tank.

The 600-gallon AST is located west of and adjacent to Building 357. A concrete secondary containment surrounds the AST. JCNNM Stationary Equipment maintains the 600-gallon AST on a weekly basis. The tank is used as a backup fuel source for the standby generator inside Building 357. Transfer piping into Bldg. 357 travels along the west side of 357 and into the bldg. All piping for this transfer is aboveground.

The Fuel Storage tanks at the TA-21 Power Plant are made from commonly accepted metal and steel alloys used for manufacturing fuel storage tanks.

2.3. Secondary Containment

The 53,000-gallon No. 2 fuel oil AST is located inside an 88,671-gallon lined earthen berm secondary containment. The containment area measures 50 feet wide, 96 feet long, and 2.25 feet deep. This capacity is large enough to contain the entire contents of the tank, plus an additional 10% freeboard for storm water or

fire suppression fluid accumulations. A sump with an oil skimmer is located within the secondary containment unit. The hyplon lined containment area is sufficiently impervious to contain diesel.

Tank trucks are unloaded in the transfer area north of the tank on the other side of the fence. The asphalt curbing that surrounds the transfer area would direct flow from a spill into the lined earthen containment. When the terminal connection at the transfer area is not in use, the transfer point is capped.

The 600-gallon No. 2 fuel oil AST is located inside a concrete secondary containment. The containment volume of 1,100 gallons is large enough to contain the entire contents of the tank contents, plus an additional 10% freeboard for storm water or fire suppression fluid accumulations.

2.4. Secondary Containment Drainage Operations

Storm water accumulation may occur within the AST secondary containment units. If storm water must be discharged for worker safety or to access tanks and pipes, it will be drained through a valve on the secondary containments. Storm water is typically left to evaporate.

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 discharge operations:

- Visually inspect accumulation to ensure that the water does not possess an oil sheen, odor, or other constituents that could result in a harmful discharge.
- Notify the JCNNM Environmental Branch(HENV), prior to a discharge at 667-0104.
- Notify LANL Water Quality & Hydrology Group (ESH-18) at **665-4752** to obtain authorization for release and for testing of contaminates and pH, if necessary.
- Properly record each drainage operation. Include the time, date, and employee who performed the operation. (Records will be kept in Appendix B of this document in accordance with Section 3.2 and in the plant operators daily log book.)

2.5. Integrity Testing

40 CFR Part 112, Section 7(2)(vi) states, "Aboveground tanks should be subject to periodic integrity testing, taking into account tank design and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing." Integrity testing incorporates both visual and internal inspection to determine the structural integrity of a storage tank, its associated piping, and its support structures. Such testing must be conducted by a certified inspector. American Petroleum Institute (API) standards 510 and 653 are the primary U.S. industry standards for storage tank inspection and testing.

Integrity testing and in-service inspections are periodically performed to evaluate the integrity of the AST. Testing was last completed in March 1997, following the guidelines of 40 CFR 112 and API Standard 653. Test records are provided in Appendix A.

Visual inspections will be performed by the on shift operator on a daily routine basis, consistent with the particular site conditions. The daily inspection is recorded on the TA-21 daily inspection form. All storage vessels will be given a formal visual external inspection by a qualified inspector every five years or at the quarter corrosion-rate life of the shell, whichever is less. The time between internal inspections for the AST shall not exceed 20 years. The integrity-testing interval for the AST will be primarily derived from the service history of the tank and manufacturer's recommendation.

Tank inspection history reports form the basis for integrity-testing record keeping. Records shall include all examinations and tests, conditions found, thickness measurements, settlement measurements, repairs/alterations, and recommendations. Inspection records are retained in Appendix A of this document in accordance with Section 3.2.

2.6. Facility Transfer Operations

Oil is transferred through aboveground piping between the tanker truck transfer area and the AST through the pump house and surge tank and then to AST 57, only when the tanker truck Power Take Off(PTO) is not available. If a PTO is available No. 2 fuel oil transferred through above ground piping bypassing the pump house and surge tank. The piping from the transfer area is above ground and is located over the lined secondary containment until it reaches the pump house, which is outside of the secondary containment. Two valves located inside the pump house are normally closed except during fuel transfer. The valves are manned continuously during fuel transfer. Any removal or additional filling of the AST will follow facility-specific and Department of Transportation procedures and regulations.

Transfer piping operation is guided by the following:

- Aboveground piping lines shall be capped when not in service or in standby service, and marked with origin. The lines do not have to be drained since they are over the secondary containment.
- Pipe supports do not lead to abrasion or corrosion and allow for normal expansion and contraction.
- All piping and equipment in vehicle access areas shall be clearly marked by appropriate signs, and bollards are in place for protection.
- Regular inspection of the piping and equipment is conducted.
- Trenches, curbing, and sumps are of sufficient capacity to contain normal spills.

2.7. Fail-Safe Engineering

Inventory controls used to help detect potential leaks include a monthly measurement (visual inspection) of the liquid level inside the tank and inventory reconciliation. The monthly tank levels are adjusted for the daily temperature to calculate the volume and to determine if a loss is indicated. Inventory reconciliation includes accurate measurement of the deliveries into the tank, use from the tank, and the remaining inventory. The inventory of the tanks takes into account fluid expansion or contraction from fluid temperature changes. If consistent losses are indicated, an investigation is conducted to determine if the loss is due to accounting errors or tank leakage. Records of monthly measurements will be recorded and retained in Appendix A in accordance with section 3.1. Plans are currently being discussed to include automatic pressure sensors to monitor the levels of the tank.

Internal heating coils are not used. Visible oil leaks will be promptly corrected. Leaks and corrective actions will be recorded in Appendix C.

3. ADDITIONAL SPCC REQUIREMENTS

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, security, training, spill prevention, and Plan amendment. The following sections address implementation of these requirements at the TA-21 Steam Plant.

3.1. Inspections

In addition to the integrity testing of the AST described in Section 2.5, other types of inspections related to oil-spill prevention are performed at the TA-21 Steam Plant. These inspections are outlined below. Additional information pertaining to daily inspections conducted at the TA-21 Steam Plant is contained in the *TA-21 Steam Plant Daily Inspection Form*. This document provides a description of the equipment or material to be inspected. Hourly inspections are also performed inside the plant by the shift operator

Inspections and maintenance activities include general operator observations and walk-around inspections. Formal documented walk-around inspections are conducted by JCNNM HENV at least semi-annually.

Daily Inspections (on workdays)

Steam Plant Operator walk-around: The on-shift Steam Plant Operator conducts walk-arounds each day as part of their routine operations and preventive maintenance program to check the plant equipment and facility grounds. During these checks, potential problems and maintenance needs at the No. 2 fuel oil Tank are identified, including spills or leaks, the conditions and level of water contained in berms, obvious problems with tanks, valves, plugs, fittings, or containment structures, and general safety condition at the facility. Potential problems are brought to the attention of the Facility Manager, Building Manager, Foreman, and spill coordinator for further action.

Monthly Inspections

The 53,000-gallon AST is measured monthly to monitor the fuel level, and this is the only method used to monitor the liquid level inside the tank. No other monitoring devices are online at these fuel storage and transfer areas. Administrative procedures have been put in place to minimize chances of a release during transfer. Both ASTs volumes shall be measured before and after fuel oil operations and record levels in the operators daily log book.

The 600-gallon day tank is measured to monitor fuel level on a monthly basis by the JCNNM Stationary Equipment Group prior to starting the standby generator. The tank is also measured after the generator is used.

Annual Inspections

Annual inspections for underground piping containing a regulated substance shall be done as required in NMED UST Regulations.

Five-Year Inspection

Tank inspection: A formal visual external inspection is conducted by a qualified inspector per requirements in API 653.

3.2. Record Keeping

The inspections identified in Section 3.1 are documented on the applicable forms found in Appendix A. These inspection reports identify the date the inspection was performed, noted observations or measurements, and the name or initials of the inspector. Completed inspection reports will be maintained in the SPCC Plan within Appendix A.

Additional records that will be kept as they are generated include spill reports, secondary containment unit storm water discharge records, and training records. In the event of a spill, the spill tracking form in Appendix C will be used to describe the spill, the corrective actions taken, and plans for preventing recurrence. Copies of spill reports will also be retained in Appendix C. Storm water discharge records will be retained in Appendix B and training records will be documented by the Building Manager. As applicable, any additional training documentation will be maintained in Appendix D.

All inspection records, spill reports, and other applicable data and documentation will be kept with this Plan and retained for a period of three years. All original records will be kept with the SPCC Plan in the TA-21 Steam Plant operators office. A copy of all SPCC records will be forwarded to the FMU to be kept in their central building records. When the operating group ceases operations and vacates the space, all original records will be transferred to the FMU.

3.3. Security

SPCC Plan requirements dictate that storage facilities should be fenced and locked or secured when the facility is not attended or in operation. There is a fence around the TA-21 Steam Plant including both ASTs, and the gate is locked and accessible only to authorized personnel at all times. Access to building TA-21-357 and both ASTs requires personnel to sign a visitors log in Building 357. LANL security personnel also regularly patrol the facility and its surrounding area.

In addition to restrictions on facility access, pumps and valves shall be locked out and tagged or disabled by operational personnel when not in operation. Aboveground piping is capped or blank-flanged when not in service or in standby service for an extended period of time.

Facility lighting is sufficient to facilitate the discovery of a spill at night. The interior areas of building TA-21-357 housing the offices, boilers, and backup generator are well illuminated.

3.4. Training

40 CFR Part 112.7 (10) states, "Owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharge of oil and applicable pollution-control laws, rules, and regulations." To fulfill this requirement, formal employee training is conducted at least annually, and more often when needed, to ensure that all site workers have an adequate understanding of the SPCC Plan for the facility and the individual responsibilities of each involved employee. Training topics include:

- goals and objectives of the SPCC program,
- additional applicable pollution control laws, rules, and regulations,
- practices for preventing spills,
- procedures for responding properly and rapidly to spills,
- protocol used to report spills,
- operations and maintenance of equipment,
- spill events or failures,
- malfunctioning components, and
- recently developed precautionary measures.

These and other associated topics may also be covered during routine employee meetings. In addition to the annual training, *Oil Spill Prevention, Control and Countermeasures, Utility Operating Instructions* (UOI # 66-10-0055) addresses oil-spill control and countermeasures specific to No. 2 fuel oil transfer operations of the facility.

JCNNM UESB is responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil. The training is done on an annual basis through the UOI process that addresses spill prevention. Training is scheduled at intervals frequent enough to assure adequate understanding of the SPCC for their facility. The meetings highlight and describe known spill events or failures, malfunctioning components, precautionary measures, and spill-kit usage.

Training activities are documented in the LANL EDS and in accordance with LANL's Training Standard LS113-09.0, *Training Documentation.* Informal briefings are documented by recording the attendance and maintaining a file of the meeting roster. Training documentation will be maintained in the SPCC Plan within Appendix D.

3.5. Spill Prevention, Response & Reporting

Spill prevention for the TA-21 Steam Plant is achieved primarily through proper implementation of the SPCC Plan. This effort includes training employees on appropriate spill prevention and work procedures, and performing inspections and maintenance activities to minimize the potential for equipment failure. Work is also performed using LANL's five-step Integrated Safety Management approach, which evaluates a task and identifies potential hazards such as a spill event. The designated individual for the TA-21 Steam Plant who is accountable for oil spill prevention and who reports to line management is the TA-21 Steam Plant shift operator.

Spill response measures include both the proper training of facility personnel and the use of onsite spill controls. Steam Plant operational and facility site workers are trained in spill response procedures through the SPCC Plan training program and UOI # 66-10-055, *Oil Spill Prevention, Control and Countermeasures.* UOI # 66-10-170 also provides procedure for the safe handling of #2 fuel oil to and from the AST.

Onsite controls (which include oil-only wiping cloths, oil sponges, 4-inch diameter booms, granulated absorbent, squeegees, wringers, gloves, assorted tools, and personal protective equipment) are organized into spill-control stations located inside Building 357, Room 101.

General response measures for No. 2 fuel oil scenarios are described below.

The LANL (EM&R) Office will be notified if a spill cannot be easily controlled with the materials on hand, if it threatens to escape the facility or enter the environment, if additional resources are needed, if an unidentified hazard exists, if injuries have occurred, if fire protection is needed, or if operational or facility personnel are not adequately trained in the use of spill-control equipment or are not confident in their ability to carry out spill-response activities. The EM&R Office may also be notified if the Operations Officer determines that the situation warrants such action. EM&R, which has been appointed by the Laboratory Director as the organization responsible for emergency management at LANL, may be contacted at **667-6211** or after hours at **667-7080.** In such an event, the 24-hour on-call Facility Manager Designee (FMD) must also be notified at **104-5997.**

Additional guidelines prompt spill mitigation for spills of 25 gallons or less can be found in the Draft Final procedure titled *Bioremediation of Hydrocarbon Spills at LANL.*

Spills on Asphalt and Concrete less than 25 gallons: Contain the spill with flow inhibitors such as spill booms, pillows, pads, etc. If necessary, absorbents such as "Oil Sponge" will be placed on any remaining liquid. Personnel will contact EM&R and if the spill is not easily controlled EM&R will activate the JCNNM Emergency Response Recovery Team(ERRT) for assistance in cleaning up the spill and contact the JCNNM Environmental Branch Spill Coordinator to manage the waste. The JCNNM Environmental Branch Spill Coordinator will determine if the spill meets criteria for bioremediation, and if it does the Spill Coordinator will provide oversight to the JCNNM-ERRT during the bioremediation process. All waste

materials associated with a spill will be disposed of in accordance with LANL requirements and, state and federal regulations.
In the event of any spill exceeding five gallons, the following TA-21 Steam Plant personnel will be notified by the on-shift facility operator:

Name	Title	Work	Pager	Home	Cell
Eric Martinez	Building Foreman	667-4030	104-6440	685-4221	
Robert Montano	Building Manager	665-7055	104-3567	771-0693	699-1244
Joe Ortiz	Spill Coordinator	667-4842		471-2954	
Paul Parker	Facility Engineer/Branch Manager	665-5434	104-5146	829-3727	
Jerome Gonzales	FWO-UI Facility Representative	665-2612	996-0963	583-2210	
24-hr on-call FMD Mell Smithour	Utility Inspector	665-3153	104-5997	662-2643	

Spills shall be reported in accordance with LANL LIR 402-130-01.0, *Abnormal Events*. Spill events in excess of one quart will also be documented in Appendix C of the SPCC Plan. Required LANL spill reports will be completed by the organization responsible for overseeing site operations, and copies of the reports will be maintained by both the responsible organization and ESH-18. The federal reporting of spill events is the responsibility of ESH-18, and the determination for such notification will be made by ESH-18 and the EM&R Office in accordance with Laboratory and DOE policies, and with federal and state regulatory reporting requirements.

3.6. 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.

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 three years by the operating group and/or Facility Manager, and by ESH-18 and HENV. As a result of this review and evaluation, the SPCC Plan will be amended within six months of the review to include more effective prevention and control technology if:

1) such technology will significantly reduce the likelihood of a spill event from the facility, and
2) if such technology has been field proven at the time of review.

HENV shall amend the TA-21 Steam Plant SPCC in accordance with 40 CFR 112.7.

Changes to inspection forms or the spill contact list, the addition of records to the Plan, or development of a memorandum of understanding between the operating group/division and the FMU modifying the distribution of responsibilities do not require certification by a Professional Engineer (PE). All other amendments to the SPCC Plan shall not be effective to satisfy the regulatory requirements governing the document unless they have been certified by a PE.

Appendix A

Inspection Reports and Test Records

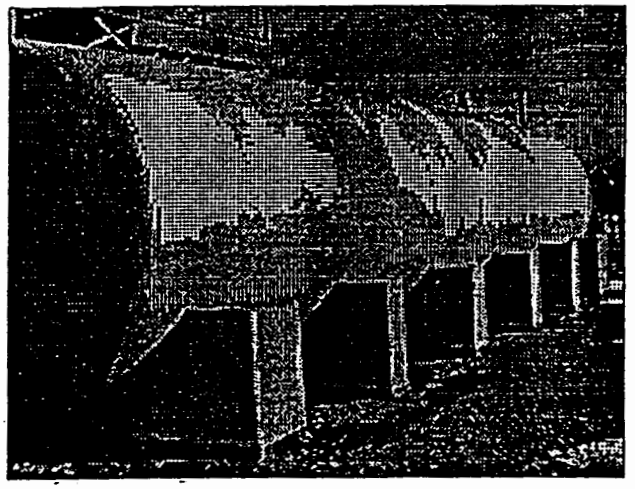
Above Ground Storage Tank

Records for

Inservice Inspection

Using

API 653 and 40 CFR 112



TA 21 TA-21 Steam Plant

Structure ID: 57-AST

50,000 Gal. Diesel Fuel

Inservice Inspection of Tank Shell to API 653

ID:	21	Structure ID:	57-AST	Lead Inspector:	Kelly Bingham
Update:	2/11/97	Update By:	KLB	Inspection Date:	2/11/97

Visually inspect for paint failure, pitting, and corrosion:

There is no evidence of paint failure, pitting or corrosion.

Clean off the bottom angle area and inspect for corrosion and thinning on plate and weld:

This is a horizontal tank , and has no bottom angle.

Inspect the bottom to foundation seal if any:

N/A

Visually inspect the floating roof for grooving, corrosion, pitting, and coating failure?

Inspect external surface for active product seam leaks?

Locate leaks by sketch or photo?

Inspect rivets for corrosion loss and wear?

Inspect vertical seams to see if they have been full fillet lap welded to increase joint efficiency:

Record the vertical seam, rivet pattern, size, pitch length and note whether lap or butt riveted:

Inspect windgirder and handrail for corrosion damage:

Check support welds to shell for pitting, especially on shell plates:

Note whether supports have reinforcing pads welded to shell

Inspect for cracks and signs of leakage on weld joints at nozzles, manways, and reinforcing pla

Inspect for shell plate dimpling around nozzles, caused by excessive pipe deflection

Inspect for flange leaks and leaks around bolting

Inspect sealing of insulation around manways nozzles

Check for inadequate manway flange and cover thickness on older manways

Inspect manifold piping, flanges, and valves for leaks

Inspect fire fighting system components

Check for anchored piping which would be hazardous to the tank shell or bottom connections during earth movement

Check for adequate thermal pressure relief of piping to the tank

Check the operation of regulators for tanks with purge gas systems

Check sample connections for leaks and proper valve operation

Check for damage and check the accuracy of temperature indicators

Check welds on shell mounted davit clips above valves 6" and larger?

Inspect autogage tape guide and lower sheave housing (floating swing) for leaks?

Inspect autogage head for damage.

Bump the checker on the autogage head for proper movement of tape.

Identify size and construction material of autogage tape guide.

Inservice Inspection of Tank Foundations to API 653

TA: 21 | Structure ID: 57-AST | Lead Inspector: Kelly Bingham

Initial: 2/11/97 | Update By: KLB | Inspection date: 2/11/97

Levelness: Required | Tank ID#: 10

Levelness Readings:

When required, levelness readings are shown on the same drawings as the grid and locations of the ultrasonic thickness readings.

What is the condition of the concrete ring?

N/A This tank sits on concrete piers inside of a dirt containment dike with a plastic liner.

Inspect drain openings and surface of the ring for indications of leakage.

The drike in the dike has standing water over it.

Inspect for cavities under foundation and vegetation against bottom of tank.

There are no cavities or vegetation within the dike.

Checks that runoff rainwater from the shell drains away from the tank.

The rain water drains away from the tank because it is on peirs.

Checks for settlement around the perimeter of the tank.

There is no sign of settlement.

Check for settlement of tanks into asphalt base which would direct run off rain water under the tank instead of away from it.

N/A

Look for areas where leaching of oil has left rock filler exposed, which indicates hydrocarbon leakage.

There is no sign of leaching or leaks.

Checks for settlement into the base which would direct rain water under the tank rather than away from it.

N/A

Presence of crushed rock under the steel bottom usually results in severe underside corrosion. If present, further out of service testing should be done.

N/A

Check site for drainage away from the tank and associated piping and manifolds.

N/A

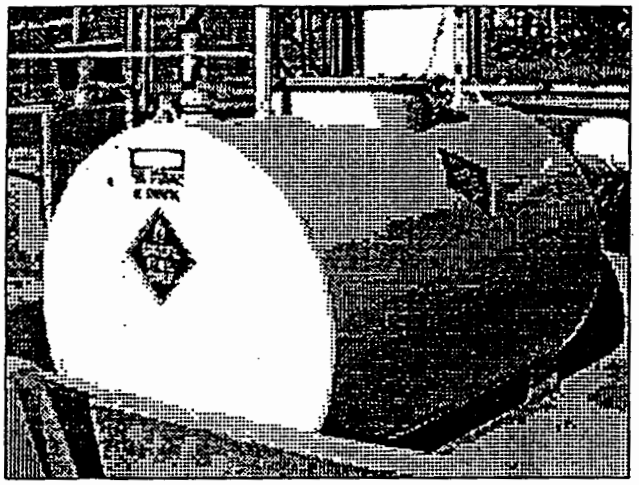
Check operating condition of dike drains.

The dike drains have standing water over them.

Inspect the area for buildup of trash, vegetation, and other inflammables buildup.

There is no trash or vegetation in the dike.

Above Ground Storage Tank
Records for
Inservice Inspection
Using
API 653 and 40 CFR 112



TA 21 TA-21 Steam Plant

Structure ID: 357B-AST

600 Gal. Diesel Fuel

Inservice Inspection of Tank Shell to API 653

TA	21	Structure ID	357B-AST	Lead Inspector	Kelly Bingham
Update	1/23/97	Update By	KLB	Inspection date	1/23/97

Visually inspect for paint failure, pitting, and corrosion.

The tank has no paint on the bottom 1/8. It shows signs of rust and flaking,however we were unable to get UT thicknesses in this area because it

Clean off the bottom angle area and inspect for corrosion and thinning on plate and weld.

N/A

Inspect the bottom to foundation seal if any.

N/A

Visually inspect the floating roof for grooving corrosion, pitting, and coating failures?

N/A

Inspect external surface for rivet and seam leaks.

There is no evidence of leakage.

Document by sketch or photo?

N/A

Inspect rivets for corrosion loss and wear?

N/A

Inspect vertical seams to see if they have been full fillet lap welded to increase joint efficiency.

The only vertical weld seams are the head to shell welds. They are single pass fillet welds.

Record the vertical seam rivet pattern, size, pitch length and note whether lap or butt rivet.

The location of seams is recorded on the UT thickness diagrams.

Inspect wind girder and hand rail for corrosion damage.

N/A

Check support welds to shell for pitting, especially on shell plate.

The stand to tank welds show no signs of pitting etc.

Note whether supports have reinforcing pads welded to shell

N/A There are no reinforcing pads.

Inspect for cracks and signs of leakage on weld joints at nozzles, manways, and reinforcing pl

There are no signs of cracks, pitting , orother defects on these welds.

Inspect for shell plate dimpling around nozzles caused by excessive pipe deflection

There is no dimpling or distortion at the nozzles.

Inspect for flange leaks and leaks around bolting

There is no evidence of leakage.

Inspect sealing of insulation around manways, nozzles?

N/A

Check for inadequate manway flange and cover thickness on mixer manways?

N/A No manway.

Inspect manifold piping, flanges, and valves for leaks

There is no leakage in the valves or piping.

Inspect fire fighting system components

N/A

Check for anchor clipping which would be hazardous to the tank shell or bottom connections during seismic movement?

The tank sets in a concrete basin which would move with the tank.

Check for adequate thermal pressure relief of piping to the tank

There are pressure relief valves in the system.

Check the operation of regulators for tanks with purge gas systems

N/A

Check sample connections for leaks and proper valve operation

N/A

Check for damage and check the accuracy of temperature indicators

N/A

Check weld on shell mounted davit clips above valves 6" and larger.

N/A

Inspect autogage tape guide and lower sheave housing (floating swings) for leaks.

N/A

Inspect autogage head for damage.

N/A

Bump the checker on the autogage head for proper movement of tape.

N/A

Identify size and construction material of autogage tape guide.

N/A

Inservice Inspection of Tank Foundations to API 653

TA: 21 Structure ID: 357B-AST Lead Inspector: Kelly Bingham

Update: 2/3/97 Update By: KLB Inspection_date: 2/3/97

Levelness: N/A Tank ID#: 1

Levelness Readings:

When required, levelness readings are shown on the same drawing as the grid and locations of the ultrasonic thickness readings.

What is the condition of the concrete ring?

N/A

Inspect Drain openings and surface of the ring for indication of leakage:

No signs of leakage.

Inspect for crevices under foundation and vegetation against bottom of tank:

N/A

Check that runoff rainwater from the shell drains away from the tank:

The tank sits in a concrete basin, which can have standing water above the bottom of the tank after a rain fall.

Check for settlement around the perimeter of the tank:

N/A

Check for settlement of tank into asphalt base which would direct run off rainwater under the tank instead of away from it:

N/A

Look for areas where leaching of oil has left rock fill exposed, which indicates hydrocarbon leakage.

N/A

Check for settlement into the base which would direct rain water under the tank rather than away from it.

N/A

Presence of crushed rock under the steel bottom usually results in severe underside corrosion. If present, further out of service testing should be done.

N/A

Check site for drainage away from the tank and associated piping and manifolds.

The basin drain is higher than the bottom of the tank.

Check operating condition of diked drains.

The basin drain is locked-out.

Inspect the area for buildup of trash, vegetation, and other inflammables buildup.

There is no vegetation or trash build up.

TA-21 DAILY INSPECTION FORM

* OK = compliant AR = action required

ABOVEGROUND DIESEL TANK	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat
Secondary Containment							
Tank Condition							
Spill Control							
Labels							
Transfer lines/valves							
Liquid Level							
Security/Lighting							

ENVIRONMENTAL TANK							
Secondary Containment							
Tank Condition							
Monitors							
Spill Control							
Labels							
Security/Lighting							

DIESEL FUEL TANK							
Secondary Containment							
Tank Condition							
Spill Control							
Labels							
Monitors							
Security/Lighting							

Date/Time							
Analyst							

* Note deficiencies on the back of this form

Appendix B

Storm Water Discharge Records

SECONDARY CONTAINMENT
STORM WATER DISCHARGE RECORD

LOCATION: TA-_____ Bldg._____

DESCRIPTION OF TANK:_____

USER GROUP:_____ **CONTACT PERSON:**_____

PHONE:_____ **PAGER:**_____

***DATE AND TIME OF DISCHARGE:**_____

***DURATION OF DISCHARGE:**_____

***VOLUME OF DISCHARGE:**_____

DESCRIPTION OF CONTAINMENT:_____

_____

_____

ESH-18 CONTACT OR DESIGNEE:_____

SAMPLES TAKEN: YES NO (*If Yes, complete sampling form*)

DISCHARGED RECOMMENDED: YES NO (*Complete comment section below*)

COMMENTS:_____

_____

_____

_____

_____

_____

*Information to be completed by User Group

Complete the discharge record and return to Robin Reynolds, ESH-18, MS K497

REVIEWED BY:_____ **DATE:**_____

Appendix C

Spill Records

Spill Tracking Form

Date	Spill Location	What Spilled	Quantity Spilled	Corrective Action Taken	Plans to Prevent Recurrence
1990 approx.	Undergroung piping south of valve pit toward	No. 2 oil	unknown	Area excavated and soil removed and line replaced	Line replaced and wrapped with tape
2-20-02	North of 357 underground piping	No. 2 oil	unknown	Area excavated presently under investigation to determine extent	Replace piping with dual wall or above ground

Appendix D

Training Records

UTILITIES OPERATING INSTRUCTION

Johnson Controls Northern New Mexico Los Alamos Support Services Subcontract

Date First Issued: 2/11/02 Number: 66-10-055

Revision #0: TRAINING COPY Page: 1 OF 3

Safety: Safety-related Status: PERMANENT

SUBJECT	SPILL RESPONSE - STEAM PLANT TA-21
FILING INSTR:	NEW
PURPOSE/SCOPE	To give personnel parameters for determining and making an appropriate response to any spill or unplanned release of oil, chemicals or other substances, at Steam Plant TA-21.
REFERENCE INSTRUCTIONS:	JCNNM HSE Manual, Environmental Section, E-20, Spill Reporting & Response Procedure JCNNM HSE Manual, Environmental Section, E-3, Drum Storage, Handling, Labeling and Disposal UOI #60-10-050, Utilities Chemical Hygiene Plan
ATTACHMENTS:	Attachment 1 - Spill Response Contact Telephone Numbers
APPENDICES:	Appendix A - Boiler Water Chemicals Appendix B - Fuel Oil
AFFECTED PERSONNEL:	TA-21 STEAM PLANT OPERATORS, TA-21 PLANT FOREMAN, UPPS SUPERINTENDENT, UESB WATER TREATMENT SPECIALIST
TRAINING DECISION:	NON-FORMAL TRAINING - REQUIRED READING
BRIEFING FREQ.:	TRIENNIAL

Written: Date: 2-08-02

Review: Date: 2-8-02

Review: Date: 2/8/02

Approved: Date: 2/8/02

d. Spill boundaries (inside a containment berm or escaping into the environment via a floor drain or vent).

5. If the source of the spill or leak is obvious and there is no danger of personal injury, personnel should take appropriate measures to stop or contain the flow.

6. Refer to the proper Appendix, depending upon the substance involved, as follows:

   a. Appendix A: Boiler Water Chemicals for:

      1) Nalco #1720, Oxygen Scavenger

      2) Nalco #1741, Phosphate and Polymer

      3) Nalco #8735, Ph Stabilizer (caustic soda)

      4) Nalco #1820, Tri-actamine Inhibitor

   b. Appendix B: Fuel Oil for:

      1) Fuel Oil

UTILITIES OPERATING INSTRUCTION

Johnson Controls Northern New Mexico Los Alamos Support Services Subcontract

Date First Issued: 2/11/02	Number: 66-10-055.A
Revision #0:	Page: 1 OF 3
Safety: Safety-related	Status: PERMANENT

SUBJECT:	BOILER WATER CHEMICALS
FILING INSTR:	NEW
PURPOSE/SCOPE:	Provides steps for safe and proper control and clean up of spills involving boiler water chemicals at Steam Plant TA-21.
REFERENCE FORMS/	LANL Form 1641, Spill Report located at: http://intranet.jci.lanl.gov/crypt/fcab/esh/procs/E-20.pdf
AFFECTED PERSONNEL:	ALL TA-21 STEAM PLANT OPERATORS, TA-21 FOREMAN, UPPS SUPERINTENDENT, UESB WATER TREATMENT SPECIALIST
TRAINING DECISION:	NON-FORMAL TRAINING - REQUIRED READING
BRIEFING FREQ:	TRIENNIAL

SAFETY NOTE:

1. The following protective equipment must be worn prior to commencing any work to control or clean up a boiler water chemical spill:
   a. Rubber gloves.
   b. Rubber jacket.
   c. Rubber pants.
   d. Rubber boots. .

Written:	Date: 2-08-02
Review:	Date: 2-8-02
Review:	Date: 2/8/02
Approved:	Date: 2/11/02

11. Sweep up the dry substance or the chemical-laden Zorball Sweeping Compound, being careful not to create dust.

12. Place the sweepings into a waste disposal container and place the labeled, covered container in an area to await disposal.

13. Wet mop the spill area and discard the mop bucket water into the Environmental Tank drain.

14. Contact HENV immediately to file a Form 12-04-005.1, Spill Response Form, and any other forms required by HENV.

2. Follow the Emergency Response Plan.

3. File LANL Form 1461, Spill Report, with HENV as soon as possible.

UTILITIES OPERATING INSTRUCTION

Johnson Controls Northern New Mexico Los Alamos Support Services Subcontract

Date First Issued: DRAFT	Number: 66-10-170
Revision #0:	Page: 1 OF 3
Safety: Safety-related	Status: INTERIM

SUBJECT:	FUEL OIL DELIVERY - STEAM PLANT TA-21
FILING INSTR:	NEW
PURPOSE/SCOPE:	To provide a procedure for the safe handling of #2 Fuel Oil to and from the external storage tank located at TA-21 -357.
REFERENCE FORMS/ CHECKLISTS:	Checklist 66-10-170.1, Fuel Oil Delivery Checklist
DIAGRAMS:	Fuel Oil Delivery Valve & Piping Diagram - TA-21-357 Steam Plant **(See USUP Technical Writer for Copy or refer to TA-21 Steam Plant UOI Manual)**
AFFECTED PERSONNEL:	ALL TA-21 PERSONNEL, UPPS SUPERINTENDENT, UESB SENIOR MANAGER
TRAINING DECISION:	NON FORMAL TRAINING - REQUIRED READING
BRIEFING FREQ:	TRIENNIAL
SAFETY NOTE:	1. #2 Fuel Oil (Diesel) is flammable and accidental ignition will result in a fire and/or explosion. Caution should be taken at all times when working with or near this substance. No matches or smoking is permitted at the unloading point.

Written:	Date:
Review: Rick Montoya	Date: 2-11-02
Review:	Date:
Approved:	Date:

2. In the event of a leak or spill refer to UOI #66-10-055, Spill Response -TA-21.

GENERAL:

3. The following definitions apply to this procedure:

   a. Deliveries: transference of fuel oil from a truck or tanker to the fuel storage tanks.

4. Deliveries of fuel oil shall only be scheduled during normal working hours (7:30 a.m. to 2:00 p.m.) unless prior arrangements have been made otherwise.

PROCEDURE:

DELIVERIES OF FUEL OIL

5. Obtain a copy of Form 66-10-170.1, Fuel Oil Delivery Checklist, for completion during this procedure. A diagram, Fuel Oil Delivery Valve & Piping Diagram - TA-21-357 Steam Plant, is attached for reference purposes.

6. Check the fluid levels in the fuel oil storage tanks (TANK 21-57) to ensure that the tank will not be filled beyond capacity (maximum fill is 90% of capacity). If there is not sufficient capacity in the tanks, stop the procedure immediately and contact the UPPS Superintendent.

7. Have the tanker backed into the containment berm at the Fuel Oil Unloading Dock. Inspect tanker for leaks.

FUEL OIL TRANSFER FROM TANKER TRUCK TO STORAGE TANK 21-57

8. Follow the following steps for fuel oil transfer from tanker truck to storage tank 21-57:

   a. Ensure valve E is closed.

   b. If using the unloading pumps:

1) Oil Pump # 1: Fully open valves C & D and ensure that valves A & B & E are fully closed.

2) Oil Pump #2: Fully open valves A & B and ensure that valves C & D & E are fully closed.

JOHNSON CONTROLS NORTHERN NEW MEXICO
TA-21-357 OPERATING INSTRUCTIONS

Form 66-10-170.1 FUEL OIL DELIVERY CHECKLIST

DATE:_____

INITIALS	TIME		
_____	_____	1.	Check the fluid level in the fuel oil storage tanks (TANK 21-57) to ensure that the tanks will not be filled beyond capacity.
_____	_____		If there is not sufficient capacity in the tanks, stop the procedure immediately and contact the plant foreman or the UPPS Superintendent.
_____	_____	2.	Have the tanker backed into the containment berm at the Fuel Oil Unloading Dock.
_____	_____	3.	Connect the tank's drain valve to the fuel oil inlet line.
_____	_____	4.	Follow Step 8 in UOI #66-10-170, ~~Fuel Oil~~ Delivery -TA-21 Steam Plant.
_____	_____	5.	Start fuel oil unloading pump and then have the driver open the tanker drain valve.
_____	_____	6.	After tank is empty, have driver shut valve at tanker truck. Run pump until suction pressure gauge shows zero (0). Shut pump, secure valves.
_____	_____	7.	Disconnect the tanker's hose from the fuel oil inlet line.
_____	_____	8.	Obtain a copy of the bill of lading from the tanker driver and turn in to the Plant Superintendent along with completed Form 66-10-170.1.

JOHNSON CONTROLS NORTHERN NEW MEXICO

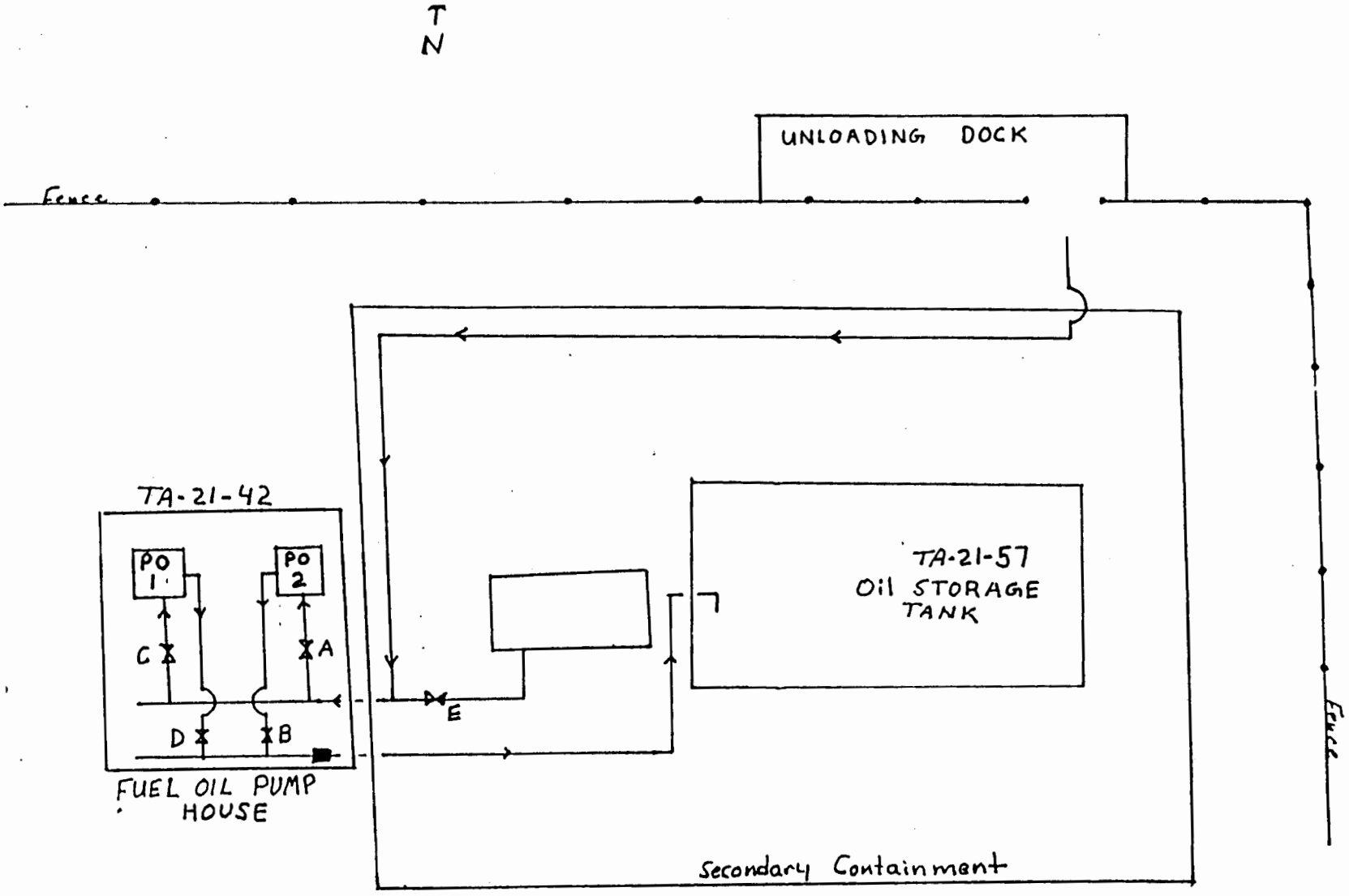
TA-21 STEAM PLANT FUEL OIL DELIVERY RECEIPT

DATE: _____ FUEL OIL DELIVERED: _____ GAL.

DESTINATION: _____

SHIPPED VIA: _____ DRIVER: _____

X_____ TA-~~3~~ 21 LOADER'S SIGNATURE


T
N
UNLOADING DOCK
Fence
TA-21-42
PO 1
PO 2
C
A
D
B
E
FUEL OIL PUMP HOUSE
TA-21-57
Oil STORAGE TANK
Secondary Containment
Fence

Appendix E

Group and Facility Contacts

Facility Owner/Operator Contacts

Facility Owner
Facility Waste Operations-Utilities and Infrastructures (FWO-UI)
Facility Management (FMU 80)
University of California (UC)
Los Alamos National Laboratory

Facility Owner Contacts

Name	*Phone*	*Pager*	*Title*
David Padilla	667-2408	996-4583	Facility Manager
Jerome Gonzales	665-2612	996-0963	Facility Representative
On call :(Mell Smithour)	665-3153	104-5997	Utility Inspector

Facility Operator
Johnson Controls Northern New Mexico (JCNNM)
Utilities/Electric/Steam Branch
Los Alamos National Laboratory

Facility Operator Contacts

Name	*Phone*	*Pager*	*Title*
Robert Montano	665-7055	104-8781	JCNNM Building Manager
Paul Parker	667-3657	104-5146	JCNNM Facility Engineer/Branch Manager

Appendix F

Certification of Applicability of the Substantial Harm Criteria

CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA

Facility Name: TA-21 Steam Plant

Facility Address: Los Alamos National Laboratory

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 ✓

2. 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 ✓

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 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 ✓

4. 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 ✓

5. 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.

David A. Padilla
Name (please type or print)

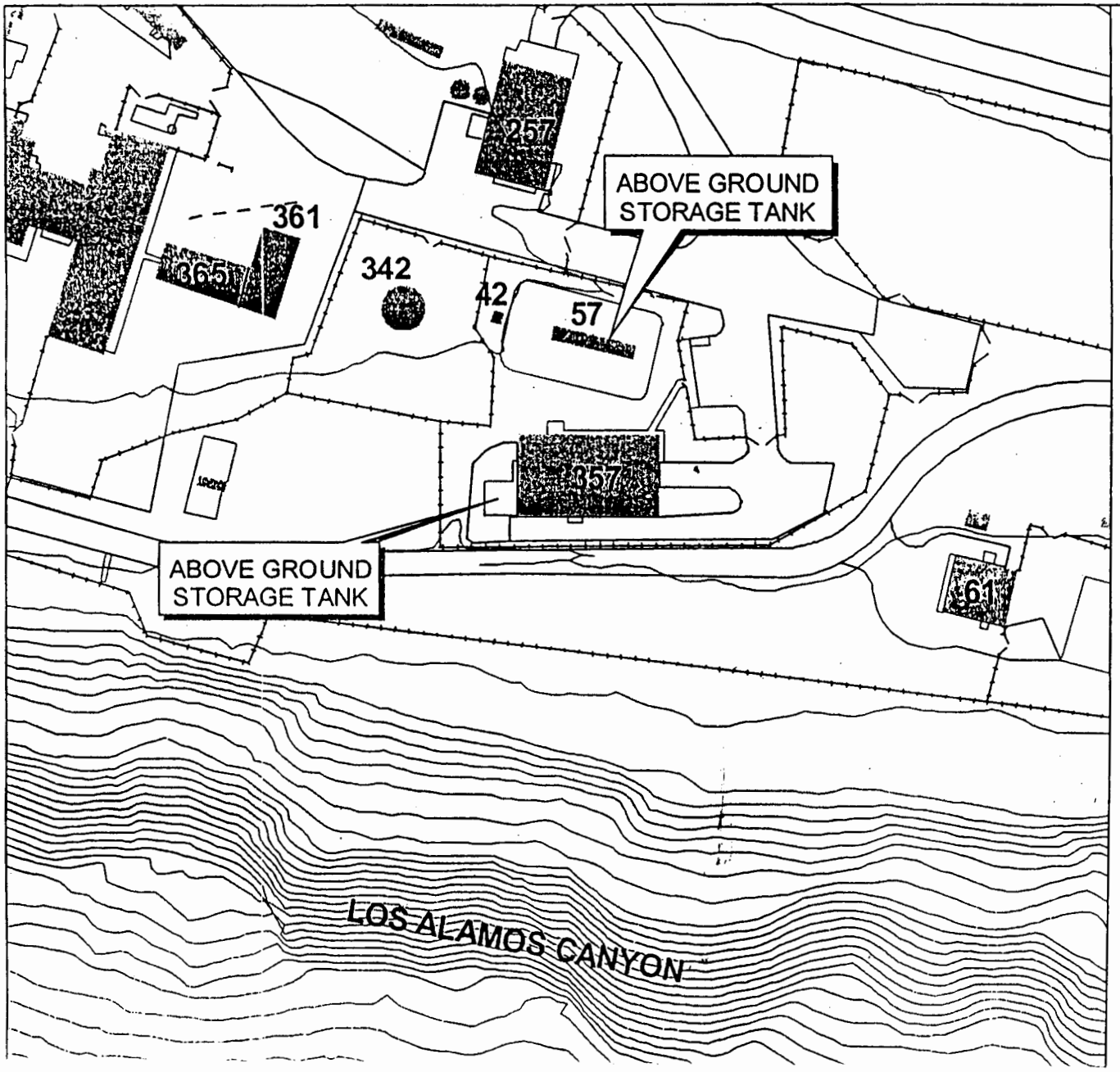
EM/LBO Facility Manager
Title

Signature

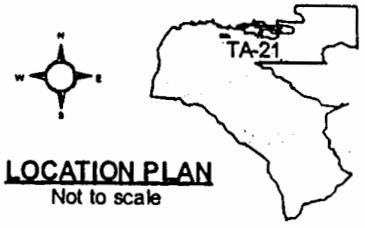
2/27/02
Date

Appendix G

TA-21 Steam Plant Site Map



Los Alamos
NATIONAL LABORATORY



LOCATION PLAN
Not to scale

SPCC FACILITY SITE MAP FOR TA-21 STEAM PLANT (TA-21-0357)

LEGEND

- Existing Structure
- Industrial Fence
- Security Fence
- Contours

50 0 50 100 Feet