

MARTIN MARIETTA

UNDERGROUND STORAGE TANK MANAGEMENT PLAN

**OAK RIDGE Y-12 PLANT
OAK RIDGE, TENNESSEE**

**Environmental Management Department
Health, Safety, Environment, and Accountability Organization**

September 1994

Prepared by

**Science Applications International Corporation
for the
Oak Ridge Y-12 Plant
Oak Ridge, Tennessee 37831**

Managed by

**Martin Marietta Energy Systems, Inc.
for the
U.S. Department of Energy
Under Contract No. DE-AC05-84OR21400**

**MANAGED BY
MARTIN MARIETTA ENERGY SYSTEMS, INC.
FOR THE UNITED STATES
DEPARTMENT OF ENERGY**

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

UNDERGROUND STORAGE TANK MANAGEMENT PLAN

OAK RIDGE Y-12 PLANT
OAK RIDGE, TENNESSEE

Environmental Management Department
Health, Safety, Environment, and Accountability Organization

September 1994

Prepared by

Science Applications International Corporation
for the
Oak Ridge Y-12 Plant
Oak Ridge, Tennessee 37831

Managed by

Martin Marietta Energy Systems, Inc.
for the
U.S. Department of Energy
Under Contract No. DE-AC05-84OR21400

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

at

MASTER

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

contributed to the preparation of this document
and should not be considered an eligible contractor
for its review.

TABLE OF CONTENTS

	Page
LIST OF FIGURES / TABLES	v
LIST OF ACRONYMS	v
EXECUTIVE SUMMARY	vii
1.0 REGULATORY REQUIREMENTS	1-1
1.1 Oak Ridge Reservation Federal Facility Agreement	1-1
1.2 Department of Energy Orders	1-1
1.3 Department of Energy UST Notification Requirements	1-1
1.3.1 Requirements for Existing Tanks	1-1
1.3.2 Requirements for New Tanks	1-2
1.3.3 Requirements for Release Reporting	1-2
1.4 Comprehensive Environmental Response, Compensation, and Liability Act	1-2
1.5 Resource Conservation and Recovery Act	1-2
1.6 Tennessee Department of Environment and Conservation Rule	1-2
1.6.1 Program Scope and Minimum Requirements for Tanks	1-3
1.6.2 UST Systems: Design, Construction, Installation, and Notification	1-4
1.6.3 General Operating Requirements	1-5
1.6.4 Release Detection	1-7
1.6.5 Release Reporting, Investigation, and Confirmation	1-11
1.6.6 Release Response and Corrective Action	1-11
1.6.7 Out-of-Service UST Systems and Closure	1-13
2.0 IMPLEMENTATION REQUIREMENTS	2-1
2.1 TDEC <i>Reference Handbook</i>	2-1
2.2 Discovery of Free Product	2-1
2.3 Permanent UST System Closure	2-5
2.4 Analytical Requirements	2-5
2.4.1 Analytical Methods	2-5
2.4.2 Data Reporting	2-7
3.0 Y-12 PLANT UST PROGRAM INVENTORY	3-1
4.0 Y-12 UST PROGRAM WASTE MANAGEMENT PRACTICES	4-1
4.1 Investigation Derived Waste	4-1
4.2 UST Upgrade Program Derived Waste	4-1
4.3 Corrective Action Derived Waste	4-3
4.4 Mixed Waste	4-3
APPENDICES	
Appendix A Applicable Portions of CERCLA	A-1
Appendix B RCRA 40 <i>CFR</i> Part 280	B-1
Appendix C TDEC Chapter 1200-1-15	C-1
Appendix D Oak Ridge Y-12 Plant UST Operational Procedure	D-1
Appendix E TDEC UST System Report Forms	E-1
Appendix F TDEC Environmental Assessment / Corrective Action Plan Guidelines	F-1
Appendix G TDEC UST Technical Guidance Documents	G-1
Appendix H TDEC UST Closure Assessment Guidelines	H-1

LIST OF FIGURES / TABLES

<u>Figure</u>	<u>Title</u>	<u>Page</u>
1	Decision flowchart for releases from petroleum UST systems.....	2-2
2	UST waste management flowchart.....	4-2
Pocket	Master UST site location map	3-9
	Individual UST site maps.....	3-11-3-57
<u>Table</u>	<u>Title</u>	
1	Summary of leak detection and corrosion protection requirements for UST systems	1-6
2	Implementation deadlines for UST performance requirements.....	1-8
3	Summary of leak detection choices for existing UST systems	1-10
4	Summary of analytical requirements for samples collected from UST sites	2-6
5	Inventory of underground storage tanks at the Y-12 Plant	3-2
6	Summary of tank and piping information	3-6

LIST OF ACRONYMS

BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
BTX	Benzene, Toluene, and Xylene
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
DRO	Diesel Range Organics
Energy Systems	Martin Marietta Energy Systems, Inc.
EPA	U.S. Environmental Protection Agency
FFA	Federal Facility Agreement
GRO	Gasoline Range Organics
IDW	investigation derived waste
NPDES	National Pollutant Discharge Elimination System
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TCLP	Toxicity Characteristic Leaching Procedure
TDEC	Tennessee Department of Environment and Conservation
TPH	Total Petroleum Hydrocarbon
TSCA	Toxic Substances Control Act
UST	underground storage tank

EXECUTIVE SUMMARY

The Underground Storage Tank (UST) Management Program at the Oak Ridge Y-12 Plant was established to locate UST systems in operation at the facility, to ensure that all operating UST systems are free of leaks, and to establish a program for the removal of unnecessary UST systems and upgrade of UST systems that continue to be needed. The program implements an integrated approach to the management of UST systems, with each system evaluated against the same requirements and regulations. A common approach is employed, in accordance with Tennessee Department of Environment and Conservation (TDEC) regulations and guidance, when corrective action is mandated. This Management Plan outlines the compliance issues that must be addressed by the UST Management Program, reviews the current UST inventory and compliance approach, and presents the status and planned activities associated with each UST system.

The UST Management Plan provides guidance for implementing TDEC regulations and guidelines for petroleum UST systems. The plan is divided into four major sections: (1) regulatory requirements, (2) implementation requirements, (3) Y-12 Plant UST Program inventory sites, and (4) UST waste management practices. These sections describe in detail the applicable regulatory drivers, the UST sites addressed under the Management Program, and the procedures and guidance used for compliance with applicable regulations.

1.0 REGULATORY REQUIREMENTS

The Underground Storage Tank (UST) Management Program at the Oak Ridge Y-12 Plant was established with the mission of locating UST systems in operation at the plant site, ensuring that all operating UST systems are free of leaks, and establishing a program for the closure of unnecessary UST systems and upgrade of existing systems that are designated to remain in service. There are a number of state and Federal regulations and guidance procedures that influence or dictate decisions made during the management of UST systems at the Y-12 Plant. This section of the UST Management Plan provides a brief outline of the applicable regulations and procedures. In addition, all activities performed under the Y-12 Plant UST Management Program must adhere to Martin Marietta Energy Systems, Inc. (Energy Systems) policies, standards, and procedures. At a minimum, the Management Program must be in compliance with the applicable requirements outlined in this section of the Management Plan.

1.1 Oak Ridge Reservation Federal Facility Agreement

UST management programs are not specifically cited within the Oak Ridge Reservation Federal Facility Agreement (FFA). The FFA does mention radioactive waste UST systems located at the Oak Ridge National Laboratory. However, no radioactive waste UST systems are located at the Y-12 Plant; therefore, the related notation in the FFA is not applicable. The Y-12 UST Management Program is implemented in compliance with orders or regulations developed by the U.S. Department of Energy (DOE), U.S. Environmental Protection Agency (EPA), and the Tennessee Department of Environment and Conservation (TDEC). A summary of these orders or regulations is presented in subsequent subsections.

1.2 Department of Energy Orders

Although no DOE order specifically addresses UST systems, applicable orders to the Y-12 UST Management Program include DOE Order 5480.1B, *Environmental Protection, Safety, and Health Program for DOE Operations*, which prescribes the program and criteria for environmental protection, safety, and health for DOE operations; and DOE Order 5400.1, *General Environmental Protection Program*, which establishes requirements, authorities, and responsibilities for DOE operations that ensure compliance with applicable Federal, state, and local environmental protection laws and regulations.

1.3 Department of Energy UST Notification Requirements

Sections 1.3.1 through 1.3.3 summarize DOE notification requirements for UST systems that are to be implemented in addition to those requirements cited in the Code of Federal Regulations (*CFR*), Title 40 Part 280.

1.3.1 Requirements for Existing Tanks

DOE facilities should review current UST system inventories and notification forms issued on or before May of 1986 to ensure that all regulated systems have been reported to the proper agencies responsible for implementation of UST regulations. In addition to notification forms for new regulated USTs, separate notification forms should be prepared and submitted concurrently for new unregulated USTs (i.e., those which are less than 110 gallons in size or are used for storage of heating oil) because DOE will treat these unregulated systems in the same manner as regulated systems.

1.3.2 Requirements for New Tanks

DOE facilities should complete notification forms 45 days prior to bringing new UST systems into use to ensure compliance with the 30-day notification requirement of the implementing agency (TDEC). The notification shall include all required information and proper certifications, and shall be submitted on the appropriate TDEC notification form.

1.3.3 Requirements for Release Reporting

Suspected releases from UST systems must be reported to the Oak Ridge Operations Center immediately upon discovery. Suspected release situations include inconclusive tank tightness tests. Site checks shall be conducted to confirm the presence of a suspected release. DOE will be responsible for notifying the implementing agency (TDEC) of known or suspected release situations in accordance with the Environmental Protection Division's Environmental Incident Reporting Procedures.

1.4 Comprehensive Environmental Response, Compensation, and Liability Act

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations can be found within 40 CFR Part 300. Although CERCLA does not specifically address UST systems, it does include language that excludes petroleum products and crude oil from regulation under CERCLA. However, any CERCLA hazardous substance(s) released to the environment via leaking hazardous substance UST systems would be addressed under this regulation. Those portions of CERCLA concerning the exclusion of petroleum products as a regulated substance are presented in Appendix A of this document.

1.5 Resource Conservation and Recovery Act

Resource Conservation and Recovery Act (RCRA) regulations regarding UST systems can be found within 40 CFR Part 280. Of these three regulations, the primary one that addresses UST system operation, closure, and reporting requirements is 40 CFR Part 280. A detailed summary of the three noted RCRA regulations, copies of the applicable sections of 40 CFR Parts 264 and 265, and a complete copy of 40 CFR Part 280 are all presented in Appendix B of this document.

The 40 CFR Part 280 was developed in response to the addition of Subtitle I to RCRA by Congress. Subtitle I required the EPA to develop regulations to protect human health and the environment from UST system releases. Under Section 9003, as amended by the Superfund Amendments and Reauthorization Act (SARA), the EPA and states under a cooperative agreement with EPA have the authority to clean up petroleum releases from UST systems, or to require system owners/operators to conduct such activities. Section 9004 permits the EPA to authorize states to implement their own UST programs in place of Federal programs provided that the state program requirements are "no less stringent" than that defined by EPA, and that the state programs provide for adequate enforcement.

1.6 Tennessee Department of Environment and Conservation Rule

Environmental compliance requirements related to petroleum UST systems located within the State of Tennessee are defined within the Rules of the TDEC, Division of Underground Storage Tanks, under Chapter 1200-1-15, *Underground Storage Tank Program*. Regulations contained within Chapter 1200-1-15 define the technical standards and corrective action requirements for owners/operators of petroleum UST systems and, therefore, apply to the Y-12 UST Management Program, which ensures compliance. A copy of the current Chapter 1200-1-15 revision is presented in Appendix C of this document. This chapter contains seven major subsections that address the following technical topics:

- Program Scope and Minimum Requirements for Tanks (1200-1-15-.01)
- UST Systems: Design, Construction, Installation, and Notification (1200-1-15-.02)
- General Operating Requirements (1200-1-15-.03)
- Release Detection (1200-1-15-.04)
- Release Reporting, Investigation, and Confirmation (1200-1-15-.05)
- Release Response and Corrective Action for UST Systems Containing Petroleum (1200-1-15-.06)
- Out-of-Service UST Systems and Closure (1200-1-15-.07)

Chapter 1200-1-15 contains five appendices that address the issues of notification for underground storage tanks, statement for shipping tickets and invoices, groundwater and soil petroleum contamination cleanup levels, and removal of underground storage tanks. Chapter 1200-1-15 also contains four additional subsections that address the following financial topics:

- Financial Responsibility (1200-1-15-.08)
- Administrative Guidelines and Procedures for the Tennessee Petroleum Underground Storage Tank Fund (1200-1-15-.09)
- Fee Collection and Certification Issuance Regulations (1200-1-15-.10)
- Underground Storage Tank Program (1200-1-15-.11)

The following discussion summarizes the major points of the technical topic subsections of Chapter 1200-1-15. A discussion of the financial topic subsections is not included because the requirements in these subsections, with the exception of annual petroleum underground storage tank fees, do not apply to Federal facilities including the Y-12 Plant.

1.6.1 Program Scope and Minimum Requirements for Tanks

The requirements of Chapter 1200-1-15 apply to all owners/operators of an UST system as defined within Rule 1200-1-15-.01(3) except as otherwise provided by deferral. The requirements contained in Rules 1200-1-15-.02 through 1200-1-15-.05, and 1200-1-15-.07 through 1200-1-15-.11 apply to owners/operators of all existing UST systems, excluding the following:

- wastewater treatment tank systems;
- any UST system containing radioactive material that is regulated under the Atomic Energy Act of 1954 (42 *USC* 2011 and following);
- any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 *CFR* 50 Appendix A;
- airport hydrant fuel distribution systems;
- UST systems with field-constructed tanks;

- equipment or machinery that contain petroleum for operational purposes, such as hydraulic lift tanks and electrical equipment tanks;
- any UST system whose capacity is 110 gallons or less;
- any UST system that contains a *de minimus* concentration of petroleum; and
- any emergency spill of overflow containment UST system that is expeditiously emptied after use.

In addition, the requirements of Rule 1200-1-15-.04 do not apply to any existing UST system that stores fuel solely for use by emergency power generators. All new UST systems, including all of the deferred systems noted above with the exception of emergency power generator systems, must meet the minimum requirements for new installations. These requirements are that no new UST system may be installed for the purpose of storing petroleum unless (1) the system will prevent releases due to corrosion or structural failure for the operational life of the system; (2) the system is cathodically protected against corrosion, constructed of noncorrodible material, steel clad with a noncorrodible material, or designed in a manner to prevent the release or threatened release of petroleum; and (3) the system is constructed or lined with material that is compatible with the petroleum.

1.6.2 UST Systems: Design, Construction, Installation, and Notification

Each new UST system must be constructed of fiberglass-reinforced plastic; steel with cathodic protection; steel-fiberglass-reinforced-plastic composite; metal without additional corrosion protection provided that the subsurface environment is determined not to be corrosive enough to cause releases during operational lifetime and that owners/operators maintain records that demonstrate compliance with this requirement; or other TDEC-approved materials. In addition, spill and overfill equipment must be provided.

Each UST system must be installed according to the manufacturer's installation instructions. Tank and piping line tightness tests are to be performed to minimize the possibility of leakage during operation. A certification of installation must be issued following tank and line testing to demonstrate compliance with installation and notification requirements. One or more of the following certification methods may be employed to demonstrate compliance:

- the installer has been certified by the tank and piping manufacturer;
- the installation has been inspected and certified by a registered professional engineer;
- the installation has been inspected and approved by TDEC;
- all work listed in the manufacturer's installation checklists has been completed; or
- the owner/operator has complied with an equivalent performance standard.

Existing UST systems that are to remain in service must comply with new UST system performance standards, upgrading requirements for existing systems, or undergo closure. Existing steel tanks must be upgraded to meet one of the following requirements: interior lining, cathodic protection, or internal lining combined with cathodic protection. Existing metal piping must be outfitted with cathodic protection. Also, existing UST systems must be outfitted with spill and overfill prevention equipment.

Notification requirements dictate that any owner who brings an UST system into service must submit a Chapter 1200-1-15 Appendix 1 form to the TDEC Division of Underground Storage Tanks 15 days prior to beginning of operation. Also, any owner/operator that replaces or upgrades an existing UST system must provide notification of such activity to TDEC using the Appendix 1 form within 30 days after completion of the replacement or upgrade. Any type of notification must be filed for each tank owned at a particular facility or location, either separately or collectively on one application. All owners/operators are required to certify compliance with the following requirements: tank and piping installation, cathodic protection, financial responsibility, and release detection.

1.6.3 General Operating Requirements

Spill and overflow control provisions require that the available volume of the tank to be filled must be greater than the proposed volume of petroleum to be added, and that the transfer operation is monitored constantly to prevent overfilling and spilling. Energy Systems has enacted procedures for filling UST systems at the Y-12 Plant that are presented in Appendix D of this document.

Corrosion protection and cathodic protection systems must be operated, maintained, and inspected in an effort to prevent the release of petroleum products. UST systems equipped with cathodic protection systems must be tested within 6 months of installation and at least every 3 years thereafter, and the protection system must be functioning as designed. In addition, impressed current cathodic protection systems must also be inspected every 60 days to ensure proper operation. For systems using cathodic protection, records of the protection operation must be maintained to demonstrate compliance, and must provide the results of the last two inspections for all protection systems and the last three inspections of impressed current protection systems. A summary of corrosion protection requirements for UST systems is presented in Table 1.

Owners/operators of UST systems must ensure that repairs will prevent releases due to structural failure or corrosion as long as the system is used to store petroleum. Repairs must meet the following requirements: repairs to systems must be conducted so as to effectively prevent releases for the operational life of the system; repairs to fiberglass-reinforced tanks must be made by the manufacturer's authorized representatives or in accordance with the manufacturer's specifications; metal pipe sections and fittings that have released product must be replaced; and repaired tanks and piping must be tightness tested within 30 days following completion of repairs. However, in place of tightness testing, one of the following methods may be used to document proper system repair: internal inspection, monthly monitoring for releases, or another test method approved by TDEC.

Owners/operators must submit the following information to TDEC:

- notification for all UST systems, including certification of installation for new UST systems;
- reports of all releases, including suspected releases, spills and overfills, and confirmed releases;
- corrective actions planned or implemented, including initial abatement measures, initial site characterization, free product removal, investigation of soil and groundwater cleanup, and corrective action plan; and

Table 1. Summary of leak detection and corrosion protection requirements for UST systems

LEAK DETECTION	
¹NEW TANKS <i>2 choices</i>	<ul style="list-style-type: none"> Monthly monitoring* Monthly inventory control and tank tightness testing every 5 years (You can only use this choice for 10 years after installation.)
¹EXISTING TANKS <i>3 choices</i> (See Table 5)	<ul style="list-style-type: none"> Monthly monitoring* Monthly inventory control and annual tank tightness testing (This choice can only be used until December 1998.) Monthly inventory control and tank tightness testing every 5 years (This choice can only be used for 10 years after adding corrosion protection and spill/overflow prevention or until December 1998, whichever date is later.)
NEW & EXISTING PRESSURIZED PIPING <i>Choice of one from each set</i>	<ul style="list-style-type: none"> Automatic flow restrictor Automatic shutoff device Continuous alarm system Annual line testing Monthly monitoring* (except automatic tank gauging)
NEW & EXISTING SUCTION PIPING <i>3 choices</i>	<ul style="list-style-type: none"> Monthly monitoring* (except automatic tank gauging) Line testing every 3 years No requirements <p>(see note)</p>
CORROSION PROTECTION	
NEW TANKS <i>3 choices</i>	<ul style="list-style-type: none"> Coated and cathodically protected steel Fiberglass Steel tank clad with fiberglass
EXISTING TANKS <i>4 choices</i>	<ul style="list-style-type: none"> Same options as for new tanks Add cathodic protection system Interior lining Interior lining and cathodic protection
NEW PIPING <i>2 choices</i>	<ul style="list-style-type: none"> Coated and cathodically protected steel Fiberglass
EXISTING PIPING <i>2 choices</i>	<ul style="list-style-type: none"> Same options as for new piping Cathodically protected steel
SPILL/OVERFILL PROTECTION	
ALL TANKS	<ul style="list-style-type: none"> Catchment basins Automatic shutoff devices Overfill alarms Ball float valves

*Monthly monitoring includes: Automatic tank gauging, groundwater monitoring, interstitial monitoring, vapor monitoring, and other approved methods.

¹Tanks of 550 gallons or less nominal capacity may use weekly, manual tank gauging as the sole method of release detection. Tanks of 551 to 2,000 gallons may use this method in place of manual inventory control. Tanks of greater than 2,000 gallons nominal capacity may not use this method to meet the requirements of this rule.

Note: No release detection is required for suction piping that is designed and constructed to meet the following standards:

1. The below-grade piping operates at less than atmospheric pressure;
2. The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;
3. Only one check valve is included in each suction line;
4. The check valve is located directly below and as close as practical to the suction pump; and
5. A method is provided that allows compliance with parts 2, 3, and 4, to be readily determined.

Source: EPA 1988. *Musts for USTs*, EPA/530/UST-88/008, September.

- notification prior to permanent closure or change in service.

Owners/operators are required to maintain the following information:

- analysis of site corrosion potential if corrosion protection equipment is not used;
- documentation of operation of corrosion protection equipment;
- documentation of UST system repairs;
- recent compliance with release detection requirements; and
- results of the site investigation conducted for permanent closure.

All of these records must be available at the site, or at a readily available alternative site for inspection by TDEC. Permanent closure records may be mailed to TDEC if they cannot be maintained at the site or at an alternative location.

1.6.4 Release Detection

Tank release detection shall be performed in such a manner as to detect a release from any portion of the UST system that routinely contains petroleum. Release detection equipment must be installed, calibrated, and maintained in accordance with manufacturer instructions including routine maintenance and service checks for operability, and must comply with the performance requirements for release detection methods.

TDEC must be notified when release detection indicates that a release may have occurred. Owners/operators must comply with release detection requirements within the specified timeframe, which is based on the year that the UST system was installed (Table 2). Any existing UST system that cannot comply with any of the eight approved methods for release detection must complete closure procedures by the release detection installation deadline.

Tanks must be monitored at least every 30 days for releases using automatic tank gauging, vapor monitoring, groundwater monitoring, interstitial monitoring, or other TDEC-approved method unless one of the following three conditions exist. First, UST systems that meet the performance standards for new or upgraded systems and monthly inventory control requirements may use tank tightness testing performed at least every 5 years as an interim release detection measure until December 22, 1998, or until 10 years after the tank was installed or upgraded, whichever is later. Second, UST systems that do not meet the performance standards for new or upgraded systems may use monthly inventory controls and annual tank tightness testing as an interim release detection measure until December 22, 1998 when the tank must be upgraded or permanently closed. Third, tanks that maintain a capacity of 550 gallons or less may use weekly tank gauging.

Piping underground that routinely contains petroleum must be monitored for releases in a manner that meets the following requirements. With regard to pressurized piping, the piping must be equipped with an automatic line leak detector and have an annual line tightness test or monthly monitoring conducted. With regard to suction piping, the piping must either have a line tightness test conducted at least every 3 years or use a monthly monitoring method. No release detection is required for suction piping if the following standards are met: the underground piping operates at less than atmospheric pressure; the piping is sloped so that the contents will drain back into the storage tank upon suction release; and only one check valve is included in the line and the valve is located directly below and as close as practical to the suction pump.

Table 2. Implementation deadlines for UST performance requirements

TYPE OF TANK & PIPING	LEAK DETECTION	CORROSION PROTECTION	SPILL/OVERFILL PREVENTION
New tanks and piping*	At installation	At installation	At installation
Existing tanks** Installed: Before 1965 or unknown 1965-1969 1970-1974 1975-1979 1980-December 1988	By no later than: December 1989 December 1990 December 1991 December 1992 December 1993	December 1998 December 1998 December 1998 December 1998 December 1998	December 1998 December 1998 December 1998 December 1998 December 1998
Existing piping** Pressurized Suction	December 1990 Same as existing tanks	December 1998 December 1998	Does not apply Does not apply
<p>* New tanks and piping are those installed after December 1988</p> <p>** Existing tanks and piping are those installed before December 1988</p>			

Source: EPA 1988. *Musts for USTs*, EPA/530/UST-88/008, September.

Approved methods of release detection for tanks used to meet the requirements for petroleum UST systems are as follows:

- Monthly Inventory Control
- Manual Tank Gauging
- Tank Tightness Testing
- Automatic Tank Gauging
- Vapor Monitoring
- Groundwater Monitoring
- Interstitial Monitoring
- Other TDEC-approved Methods

Manual tank gauging may only be used as the sole method of release detection for tanks with capacities of 550 gallons or less. This method may be used in place of manual inventory control for tanks with capacities of between 551 and 2,000 gallons. Tanks with capacities greater than 2,000 gallons may not use manual tank gauging as a release detection method.

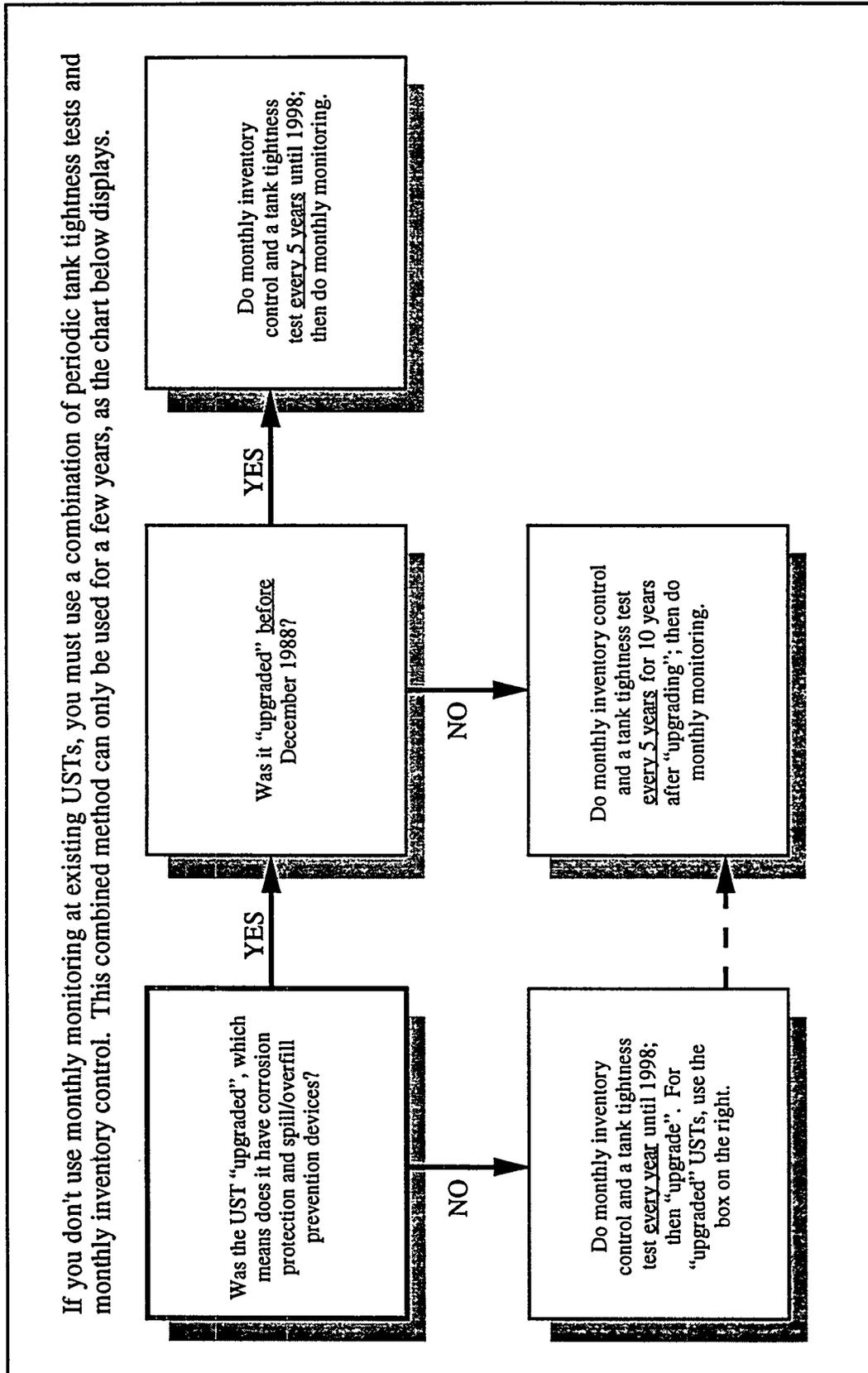
Approved methods of release detection for piping used to meet the requirements for petroleum UST systems are as follows:

- Automatic Line Leak Detectors
- Line Tightness Testing
- Vapor Monitoring
- Groundwater Monitoring
- Interstitial Monitoring
- Other TDEC-approved Methods

A summary of leak detection requirements for UST systems is presented in Tables 1 and 3.

Release detection records consisting of written performance claims must be maintained for 5 years from the detection system installation date. Sampling, testing, or monitoring data must be maintained for a 1-year period. Tank tightness test results must be retained until the next test is conducted. Written documentation regarding calibration, maintenance, and repair of on-site release detection equipment must be maintained for a 1-year period. Schedules of required calibration and maintenance, provided by the manufacturer, must be retained for 5 years from the date of the detection system installation.

Table 3. Summary of leak detection choices for existing UST systems



Source: EPA 1988. *Musts for USTs*, EPA/530/UST-88/008, September.

1.6.5 Release Reporting, Investigation, and Confirmation

Owners/operators must report to TDEC, within 72 hours, any discovery of released petroleum products, unusual system operating conditions unless the system equipment is found to be defective (but not leaking) and is repaired or replaced immediately, or monitoring results that indicate that a release may have occurred unless (1) the monitoring device is found to be defective and is immediately repaired or replaced, and additional monitoring does not confirm the initial result, or (2) in the case of inventory control, a second month of data does not confirm the initial result.

Unless corrective action is initiated, owners/operators must immediately investigate and confirm all suspected releases of petroleum requiring reporting as described above within 7 days. A system test involving tank and line tightness testing must be conducted to determine whether a leak exists in the tank(s) or associated delivery piping. If a leak is determined to exist based on the results of tightness testing, the owner/operator must repair, replace, or upgrade the UST system, and must begin corrective action. If the results of tightness testing do not indicate that a leak exists, but environmental contamination is the basis for suspecting a release, the owner/operator must conduct a site check.

A site check must be performed to detect the presence of a suspected release where contamination is most likely to be present. The nature of the stored petroleum, type of leak suspected, type of backfill, and depth of groundwater are to be considered when selecting sample types, sample locations, and measurement methods. Corrective action is only required if the site check test results for the excavation zone or the UST site indicate that a release has occurred.

Owners/operators must immediately contain and clean up spills or overfills, and begin corrective action, if the spill or overfill results in a release to the environment of more than 25 gallons of petroleum, or causes a sheen on nearby surface water. Spills or overfills of petroleum that are less than 25 gallons must be immediately contained and undergo cleanup. The TDEC Division of Underground Storage Tanks must be informed within 72 hours of any releases exceeding 25 gallons, or immediately if cleanup of releases less than 25 gallons cannot be accomplished within 72 hours.

1.6.6 Release Response and Corrective Action

Upon confirmation of a release, the initial response action by owners/operators shall include reporting the release to the TDEC Division of Underground Storage Tanks within 72 hours, immediate action to prevent additional release, and mitigation of fire, explosion, and vapor hazards. After completion of the initial response actions, further response actions may include initial abatement measures and a site check, initial site characterization, free product removal, release investigation, and a corrective action plan. Each of these actions are described below.

Initial Abatement Measures / Site Check

Unless otherwise directed, initial abatement measures and a site check must be implemented including (1) removal of petroleum from the UST system to prevent further release; (2) visual inspection of above-ground or exposed below-ground releases; (3) prevention of further petroleum migration into surrounding soil and groundwater; (4) monitoring and mitigation of hazards posed by vapors migrating from the excavation zone to subsurface structures; (5) mitigation of hazards posed by contaminated soils excavated as a result of release confirmation, site investigation, abatement, or corrective action activities; and (6) investigation to determine the presence of free product, and initiation of free product removal as soon as possible. A report summarizing initial

abatement steps, including pertinent data, must be prepared and submitted to TDEC within 20 days after release confirmation.

Initial Site Characterization

Unless otherwise directed, owners/operators must assemble information about the site and the nature of the release, including information gained while confirming the release or completing initial abatement measures. This information must include the following: nature and estimated quantity of the release; data concerning surrounding populations, water quality, use and location of potentially affected wells, subsurface soil conditions, locations of subsurface sewers, climatological conditions, and land use; and results of the initial abatement measures and site check. An initial site characterization report must be prepared and submitted to TDEC within 45 days after release confirmation.

Free Product Removal

At sites where investigation indicates the presence of free product, owners/operators must remove free product to the maximum extent possible while continuing with other response actions. Free product removal must be conducted in such a manner that minimizes the spread of contamination into previously uncontaminated zones. Unless otherwise directed, a free product removal report must be prepared and submitted to TDEC within 45 days after release confirmation. This report must present the following information: name of responsible person(s); estimated quantity, type, and thickness of observed or measured free product; type of recovery system used; whether any discharge will take place on-site or off-site during the recovery operation, and the discharge location; type of discharge treatment and expected effluent quality; steps taken or planned to obtain necessary discharge permits; and disposition of recovered free product.

Release Investigation

In order to determine the full extent and location of soil and groundwater contaminated by the release, owners/operators must conduct investigations of the release, the release site, and the surrounding area possibly affected by the release. This type of investigation is required if any of the following conditions exist: there is evidence that groundwater wells have been affected by the release, free product is discovered that requires recovery, there is evidence that contaminated soils may be in contact with groundwater, or the TDEC requests performance of an investigation. An investigation report must be prepared and submitted as soon as possible, or in accordance with a schedule established by the TDEC Division of Underground Storage Tanks.

Corrective Action Plan

At any point after reviewing information submitted in compliance with initial response, initial abatement measure / site check, or initial site characterization actions, the TDEC Division of Underground Storage Tanks may require the development and submission of a corrective action plan. If a plan is required, owners/operators must submit the plan according to a schedule and format established by TDEC. The corrective action plan will only be approved by TDEC after ensuring that its implementation will adequately protect human health, safety, and the environment. Upon approval of the plan, owners/operators must implement planned corrective actions including any modification required by TDEC. Monitoring, evaluation, and reporting of plan implementation results must be conducted in accordance with a schedule and format established by TDEC.

Owners/operators may, in the interest of minimizing environmental contamination and promoting more effective cleanup, begin remediation of soil and groundwater prior to corrective action plan approval. However, in doing so, the following conditions must be met: notify TDEC

of intention to begin cleanup, comply with any conditions imposed by TDEC, and incorporate self-initiated cleanup measures into the corrective action plan submitted to TDEC for approval.

The corrective action plan submitted to TDEC for approval must address or comply with the following requirements:

- Corrective action planning for groundwater contaminated by petroleum from UST systems that meet the contamination levels listed in Appendix 3 for drinking and non-drinking water supplies. The plan must determine if the contaminated groundwater met the definition of a drinking water supply before the contamination occurred, and propose site cleanup levels based on the category of groundwater.
- Corrective action planning for soils contaminated by petroleum from UST systems that meet the contamination levels listed in Appendix 4 for various soil permeability categories. The plan must propose site cleanup levels based on the category of soil permeability, and the category of groundwater at the site. The permeability of the soil at the site must be reported in the corrective action plan.
- For sites where the background level of petroleum, due to natural conditions, exceeds the levels for cleanup required for soil and/or groundwater as defined in Appendices 3 and 4, the owner/operator will only be required to clean up to the naturally occurring background levels.

After an owner/operator has treated petroleum contamination for an extended period of time and the treatment system has reached asymptotic levels for contaminant removal, or the owner/operator believes that a particular site should not be subject to the cleanup requirements listed in Appendices 3 and 4, the TDEC Commissioner may be petitioned for a site-specific standard. However, in the case of an extended treatment period, a site-specific standard can only be requested after the level of contamination in soil and/or groundwater has remained relatively constant for at least four quarters.

1.6.7 Out-of-Service UST Systems and Closure

During temporarily closure of a UST system, owners/operators must continue operation and maintenance of corrosion protection and release detection systems. However, release detection is not required as long as the UST system is empty of petroleum product as defined per regulatory requirements. Compliance with reporting, investigation, confirmation, response, and corrective action requirements must be initiated if a release is suspected or confirmed during temporary closure.

When an UST system is temporarily closed for 3 months or longer, owners/operators must leave vent lines open and functioning; cap and secure all other lines, pumps, manways, and ancillary equipment; and must file an amended notification form. When an UST system is temporarily closed for more than 12 months, owners/operators must permanently close the system if it does not meet either performance standards for new or upgraded UST systems, excluding the spill and overfill equipment requirements, unless a written extension of the 12-month temporary closure period is provided by the TDEC.

Permanent closure or change-in-service of UST systems require that owners/operators submit a site closure plan (application for permanent closure) to the TDEC Division of Underground Storage Tanks at least 30 days prior to initiation of activities, unless the action is in response to corrective action. Required assessment of the excavation zone must be performed after notifying TDEC but before completion of the permanent closure or change-in-service.

To permanently close or change the service of a tank, the unit must be emptied and cleaned by removing all liquids and accumulated sludges. All tanks taken out of service permanently must also be either removed from the ground or filled with an inert solid material. Should an owner/operator elect to excavate and remove a tank from the site, all excavation, removal, storage, and disposal activities must be done in accordance with Appendix 5 requirements.

Before permanent closure or change-in-service is completed, owners/operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners/operators must consider the method of closure, the nature of the stored substance, the type of backfill, depth to groundwater, and other factors appropriate for identifying the presence of a release. The requirements for assessment of the UST site can be satisfied if one of the external release detection methods described in Section 1.6.4 of this document is operating at the time of closure, and indicates no release has occurred. In the event that free product, contaminated soils, or groundwater are found during assessment activities, owners/operators must begin corrective action.

Owners/operators must maintain records that are capable of demonstrating compliance with closure requirements. The results of the excavation zone assessment must be maintained for at least 3 years after completion of permanent closure or change-in-service by the party who performed the closure, by the current UST system owner/operator, or by mailing the records to TDEC if they cannot be maintained at the closed facility.

2.0 IMPLEMENTATION REQUIREMENTS

2.1 TDEC Reference Handbook

Environmental compliance requirements related to petroleum UST systems are defined within the Rules of the TDEC under Chapter 1200-1-15. However, implementation guidelines for compliance with the requirements contained within Chapter 1200-1-15 are defined in the second edition of the TDEC Division of Underground Storage Tanks *Reference Handbook*, which was issued in January of 1994.

The *UST Reference Handbook* defines various requirements regarding the reporting, response, confirmation, investigation, and corrective action for releases of petroleum from UST systems. It also defines the requirements for closure of petroleum UST systems. Figure 1 presents a decision flowchart that is based on the *UST Reference Handbook* requirements. This flowchart illustrates the various decision pathways that should be followed after discovery of a release from a petroleum UST system.

Report forms to be utilized for documenting Initial Abatement Measures and Initial Site Characterization activities are presented in Appendix E of this document. Guidelines for the performance of Environmental Assessments and preparation of both Environmental Assessment Reports and Corrective Action Plans are presented in Appendix F. Technical Guidance Documents regarding monitoring of UST sites, procedures for obtaining a site-specific standard, performance of a general facility site check, and ranking of UST sites are presented in Appendix G.

The discussions presented in the following subsections provide information and requirements regarding UST topics that are not addressed within the Figure 1 decision flowchart.

2.2 Discovery of Free Product

In addition to the required actions and reporting presented in Figure 1, owners/operators must immediately begin removal of free petroleum product after discovery of a release in accordance with TDEC Technical Guidance Document - 004 (Appendix G). Situations that require removal of free product are: a measured thickness of free product greater than 0.10 inches in a well, the presence of a sheen on surface water, or the presence of a sheen on the ground surface or within a subsurface structure.

When free product removal is required, equipment capable of continuous free product removal must be installed within 48 hours after discovery, unless otherwise directed by TDEC. The removal system must be designed in such a manner to stop the migration of free product. Where surface water is impacted, petroleum absorbent material such as booms and pads must be installed and replaced whenever necessary. Within 45 days after release confirmation, a Free Product Removal Report must be submitted to TDEC. The form to be utilized for preparation of this report is presented in Appendix E of this document.

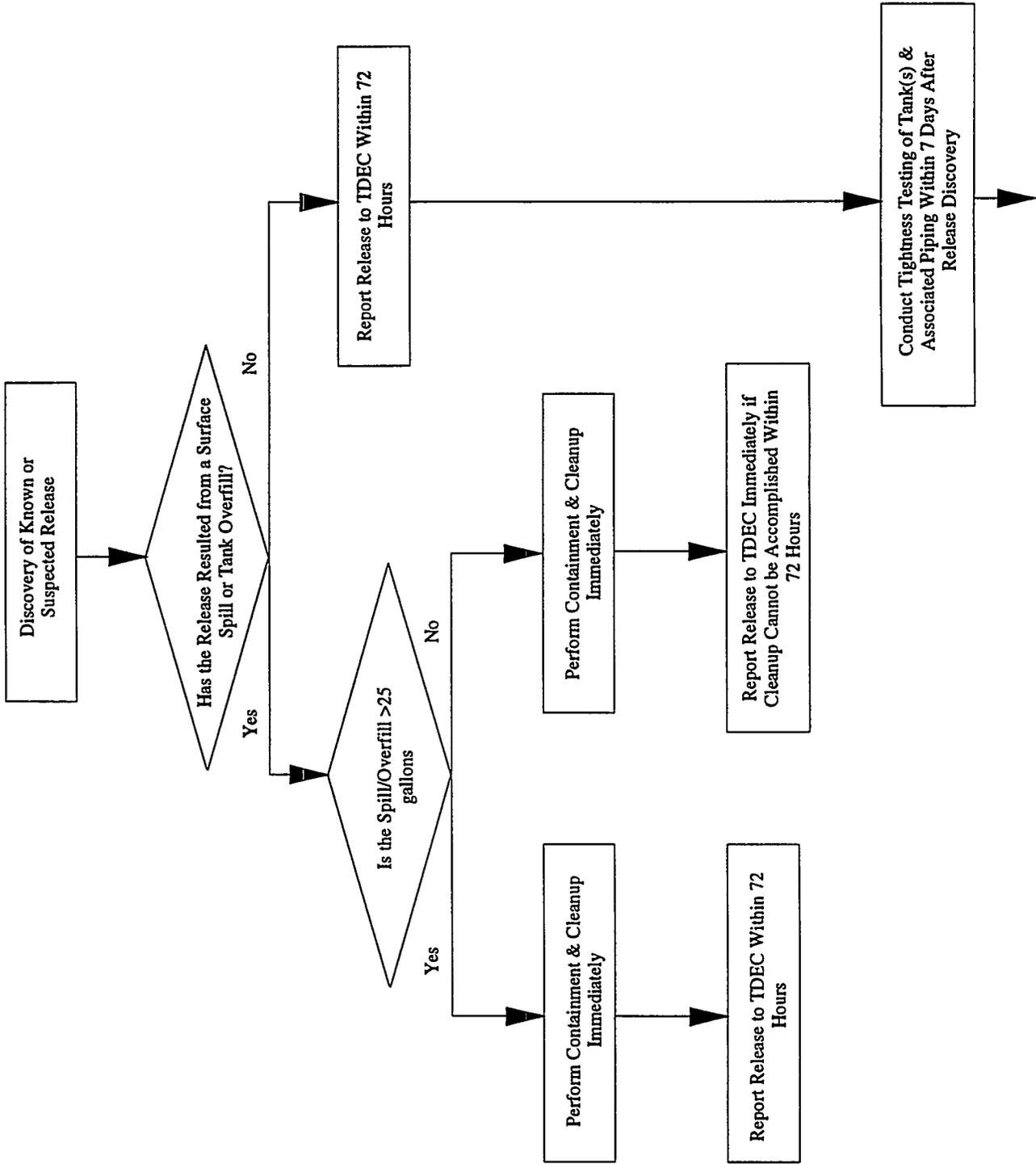


Figure 1. Decision flowchart for releases from petroleum UST systems

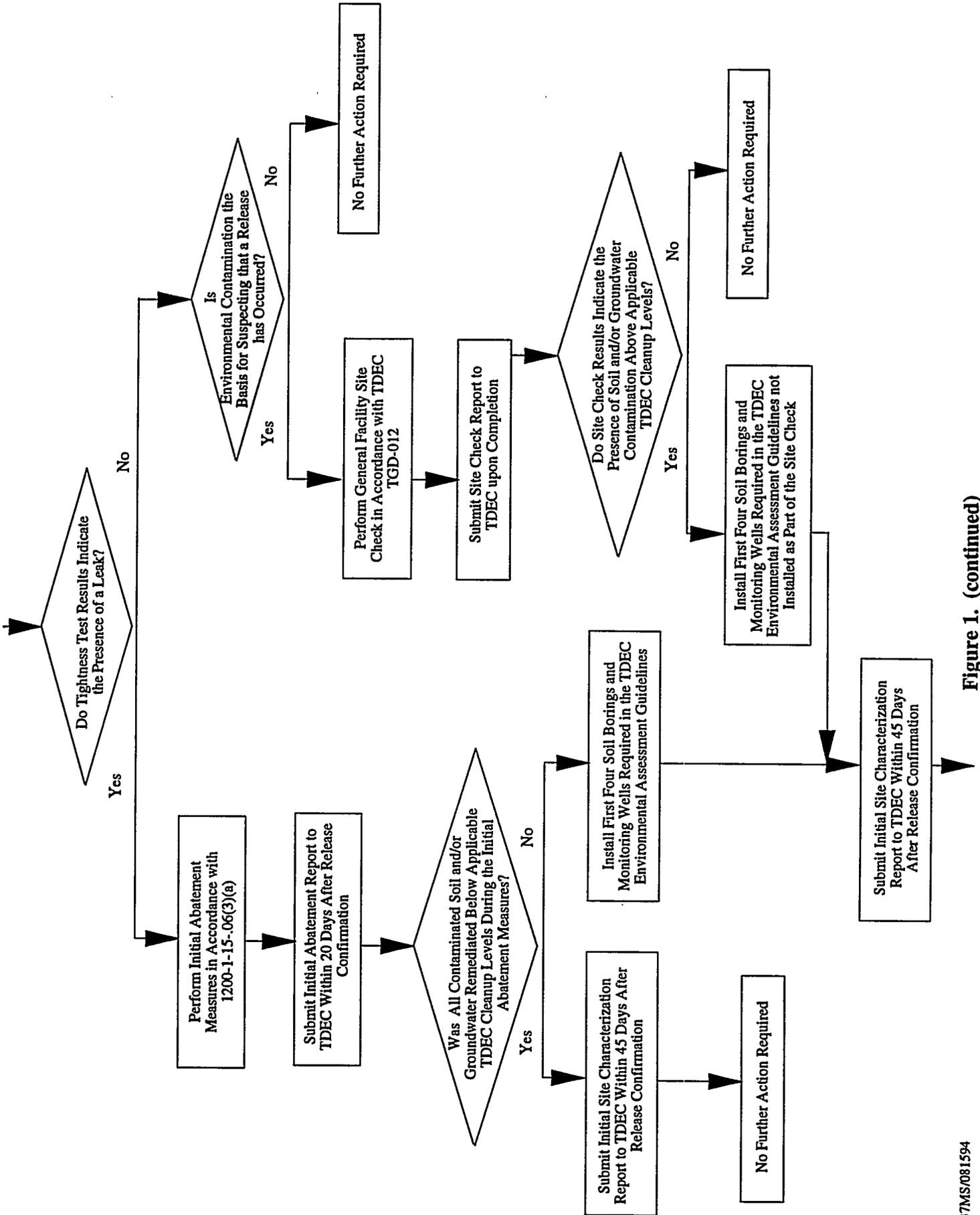


Figure 1. (continued)

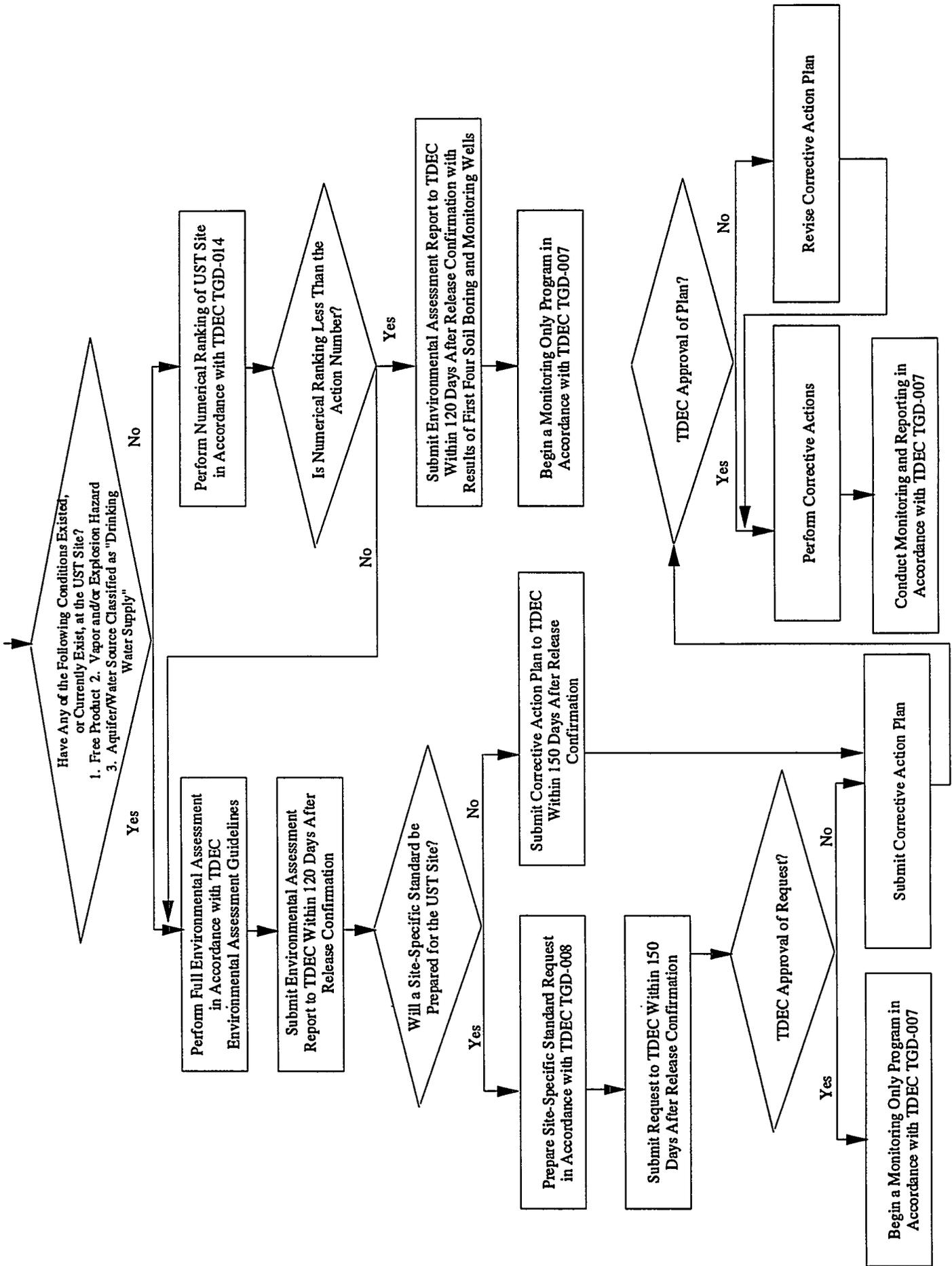


Figure 1. (continued)

2.3 Permanent UST System Closure

Requirements for the permanent closure of UST systems are defined within Appendix 5 of Chapter 1200-1-15. Implementation guidance for closure activities is presented within the Closure Assessment Guidelines section of the UST *Reference Handbook* (Appendix H). In summary, an application for permanent system closure must be submitted to TDEC 30 days prior to the beginning of closure activities. Closure begins by removing all product and sludge from the UST system, and mitigating all vapors present within the system. Tanks are then excavated and removed from the tank bay, or are closed-in-place by filling the tanks with an inert material.

Soil samples are required to be collected after the UST system has been removed or closed-in-place to ensure proper inspection of the tank bay area. In the case of UST removal, areas of obvious contamination must be overexcavated prior to sampling. However, if more than 100 cubic yards of material is overexcavated (excluding tank bay backfill), the appropriate TDEC field office is to be contacted for further instructions. The number of soil samples to be collected, and the types of laboratory analyses to be conducted, will depend upon the type of product stored and the size(s) of the tanks.

In the event that free product is discovered during the UST system closure, TDEC must be notified within 72 hours. Upon receipt of the soil sample analysis results, a Permanent Closure Report must be submitted to TDEC within 45 days after the date of sample collection. In the event that the UST system closure soil sample results indicate the presence of contamination above the applicable TDEC closure action levels, then the appropriate actions in accordance with the Figure 1 decision flowchart must be implemented.

2.4 Analytical Requirements

2.4.1 Analytical Methods

Soil and groundwater samples collected during investigations of petroleum UST sites are required to be analyzed by approved laboratories following standard methods. A listing of laboratories approved by the TDEC is contained in Section 6 of the TDEC, Division of Underground Storage Tanks, *Reference Handbook*. Required analytical parameters, methods, and practical quantification limits are summarized in Table 4 and are described below.

Both soil and groundwater samples are required to be analyzed for Benzene, Toluene, and Xylene (BTX) and Total Petroleum Hydrocarbons (TPH). BTX analyses are to be performed following Test Methods for Evaluating Solid Waste (commonly known as SW-846). Purge and trap procedures following Method 5030 should be used for sample preparation. The actual constituent analysis must follow Method 8020, using gas chromatography with a photoionization detector. However, in place of Methods 5030/8020, TDEC has approved the use of Method 8240 for BTX analysis. For soil, the level of Total BTX reported as the sum of Benzene, Toluene, Ortho-Xylene, Meta-Xylene, and Para-Xylene found in the sample, as well as the concentration of the individual results for Benzene, Toluene, and Total Xylene are reported.

Commonly, Ethylbenzene is quantified during the analysis of BTX constituents. Although not required by TDEC, Ethylbenzene results have been reported and included in the summation with Benzene, Toluene and Xylenes, resulting in a quantification of BTEX rather than BTX.

The required method(s) for TPH analyses is dependent upon the type of petroleum product released at a particular site. If gasoline or other low boiling point hydrocarbons (70°-180° F) were released, the Gasoline Range Organics (GRO) Method should be used. In the event that high boiling point hydrocarbon mixtures (180°-450° F) such as diesel fuel, kerosene, or fuel oil #2 were released, the Diesel Range Organics (DRO) Method should be used. Releases of heavy

Table 4. Summary of analytical requirements for samples collected from UST sites

SUSPECTED CONTAMINANT	ANALYTICAL METHOD	QUANTIFICATION LIMIT
Benzene	SW-846 Method 5030/8020	0.002 ppm (soil and groundwater)
Toluene	SW-846 Method 5030/8020	0.002 ppm (soil and groundwater)
Xylenes	SW-846 Method 5030/8020	0.002 ppm (soil and groundwater)
Benzene, Toluene, Xylene(s), and Ethyl benzene	SW-846 Method 8240	0.005 ppm (groundwater and soil)
Petroleum products with boiling points between 70°-180°F (e.g., gasoline)	TPH-GRO	5 ppm (for soil) 0.1 ppm (for groundwater)
Petroleum products with boiling points between 180°-450°F (e.g., diesel, kerosene)	TPH-DRO	4 ppm (for soil) 0.1 ppm (for groundwater)
Petroleum products with boiling points >450°F (e.g., used oil)	Method 503E or Method 418.1	<100 ppm (soil) 1 ppm (groundwater)
A mixture of products with one product having a boiling point between 70°-180°F and one having a boiling point between 180°-450°F (e.g., gasoline and diesel)	TPH-GRO and TPH-DRO	
Hydrocarbon type unknown	TPH-GRO and TPH-DRO	

hydrocarbon mixtures (boiling point > 450°) such as motor oil or used oil require the use of either Standard Methods of Analysis, Method 503 E, or Methods of Analysis of Water and Wastes, Method 418.1. In cases where the release of a combination of gasoline and diesel petroleum types is suspected or where the type of release is unknown, soil samples must be analyzed by both the GRO Method and the DRO Method and the results summed and reported as Total Petroleum Hydrocarbons.

2.4.2 Data Reporting

Requirements for the schematic and tabular presentation of analytical data within investigation reports are presented in the TDEC UST *Reference Handbook*. In addition to a tabular presentation of the data, original laboratory data sheets and copies of chain-of-custody forms are required to be submitted. The following information must be included on original laboratory data sheets:

- facility name;
- UST Facility ID number;
- sample location;
- sample depth from ground surface;
- date sampled;
- date submitted to the laboratory;
- date analyzed;
- analytical method; and
- detection limit.

3.0 Y-12 PLANT UST PROGRAM INVENTORY

The UST systems located at the Y-12 Plant have been grouped into the following three categories:

- active/in-service petroleum UST systems (9 tanks / 7 sites);
- permanently closed petroleum UST systems (35 tanks / 25 sites); and
- hazardous substance UST systems (3 tanks / 3 sites).

The following section presents a summary of the tanks within the Y-12 Plant UST Program inventory (Table 5) and a summary of tanks and piping information for each unit within the inventory (Table 6). A master UST site location map (located within pocket) and individual UST site maps are also presented (following pocket map). All of the location and site maps are keyed to the UST Directory Numbers identified in Table 5.

Table 5. Inventory of underground storage tanks at the Y-12 Plant

Directory Location	Location	Tank identification number	Installation date	Out of service date	Capacity (gallons)	Contents	Status	Preliminary investigations(s)	Environmental assessment () date to regulatory agency	Corrective action
<i>Petroleum USTs</i>										
1	9722-6	2312-U	1987	In use	550	Diesel	To be closed by 12/94	NA	NA	NA
2	9722-5	2313-U	1987	In use	550	Diesel	To be closed by 12/94	NA	NA	NA
3	9999-7	2316-U	1986	In use	550	Diesel	To be closed by 12/94	NA	NA	NA
4	9999-5	2320-U	1986	In use	550	Diesel	To be closed by 12/94	NA	NA	NA
5	9722-4	2333-U	1988	In use	550	Diesel	To be closed by 12/94	NA	NA	NA
6	9714	2334-U	1987	In use	6,000	Gasoline	Full compliance	Site check	NA	NA
7	9714	2335-U	1987	In use	10,000	Diesel	Full compliance	Site check	NA	NA
8	9754-3	2396-U	1993	In use	10,000	Diesel	Full compliance	NA	NA	NA
9	9754-3	2397-U	1993	In use	20,000	Gasoline	Full compliance	NA	NA	NA
10	9712	0084-U	1958	1988	500	Used oil	Removed 6/88	CERCLA	TBD	TBD
11	9204-2	0134-U	1966	1982	117	Gasoline	Removed 6/88	ISCR, FPRR	SIR (3/92)	EAR/CAP (8/92), CAP approval (5/93), CR (4/94)
12	9754-2	0439-U	1978	1989	20,000	Gasoline	Removed 9/89	IAR, ISCR, FPRR	SIR/CAP (3/91)	CAP (8/92), CAP approval (5/93), BMR (3/94), SSSR (4/94)
13	9754-2	0440-U	1978	1989	10,000	Diesel	Removed 9/89	IAR, ISCR, FPRR	SIR/CAP (3/91)	CAP (8/92), CAP approval (5/93), BMR (3/94), SSSR (4/94)
14	9754	2073-U	1944	1979	1,000	Gasoline	Removed 10/93	SI	SIR/CAP (3/91)	CAP (8/92), CAP approval (5/93), BMR (3/94), SSSR (4/94)

Table 5. (continued)

Directory Location	Tank identification number	Installation date	Out of service date	Capacity (gallons)	Contents	Status	Preliminary investigations(s)	Environmental assessment () date to regulatory agency	Corrective action	
15	9754	2074-U	1944	1979	1,000	Gasoline	Removed 10/93	SI	SIR/CAP (3/91)	CAP (8/92), CAP approval (5/93), BMR (3/94), SSSR (4/94)
16	9754	2075-U	1944	1979	1,000	Diesel	Removed 10/93	SI	SIR/CAP (3/91)	CAP (8/92), CAP approval (5/93), BMR (3/94), SSSR (4/94)
17	9754-1	1219-U	1964	1988	12,000	Diesel	Removed 12/89	EA	SIR (3/91)	CAP (5/92), SRS (2/94), SRS approval (3/94), CMR (6/94), SSSR (8/94)
18	9754-1	1222-U	1968	1988	12,000	Gasoline	Removed 12/89	EA	SIR (3/91)	CAP (5/92), SRS (2/94), SRS approval (3/94), CMR (6/94), SSSR (8/94)
19	9720-15	2068-U	1968	1980	1,000	Gasoline	Removed 2/90	EA/FPRR	SIR (3/91)	CAP (5/92), SRS (2/94), SRS approval (3/94), CMR (6/94), SSSR (8/94)
20	9754-1	2082-U	1981	1988	1,000	Gasoline	Removed 12/89	EA	SIR (3/91)	CAP (5/92), SRS (2/94), SRS approval (3/94), CMR (6/94), SSSR (8/94)
21	PRW	2310-U	1975	1989	200	Gasoline	Removed 11/89	ISCR	SIR/CAP (7/91)	EAR/CAP (3/93), CAP approval (12/93), OE (4/94, 5/94), CR (7/94)
22	9201-1	2331-U	1973	1988	560	Gasoline	Removed 12/88	ISCR, FPRR	SIR (3/92)	EAR/CAP (7/92), CAP approval (12/93), BMR (3/94), SRS (4/94), SRS Approval (5/94), CMR (8/94)
23	9401-3	0713-U	1955	1988	10,500	No. 2 fuel oil	Removed 11/88	NI	NA	NA
24	9754	0836-U	1944	1989	10,000	Used oil	Removed 10/89	RCRA	RCRA	RCRA
25	9204-3	0928-U	1966	1989	200	Gasoline	Removed 5/89	RIR closure approved (8/92)	NA	NA
26	9995	2078-U	1965	1979	110	Gasoline	Inert filed 1979	CERCLA	TBD	TBD

Table 5. (continued)

Directory Location	Tank identification number	Installation date	Out of service date	Capacity (gallons)	Contents	Status	Preliminary investigations(s)	Environmental assessment () date to regulatory agency	Corrective action	
27	9995	2079-U	1965	1979	55	Gasoline	Inert filed 1979	CERCLA	TBD	TBD
28	9996	2080-U	1971	1987	560	Gasoline	Removed 12/88	RIR	NA	NA
29	9212	2081-U	1958	1970	280	Gasoline	Removed 4/91	ISCR	NA	OE/CR (12/91)
30	9201-5	2099-U	1971	1989	560	Gasoline	Removed 7/89	IAR, RIR, closure approved (3/90)	NA	NA
31	9929-1	2117-U	1971	1983	550	No. 2 fuel oil	Removed 10/88	NI	NA	NA
32	9204-4	2130-U	1960	1992	550	Gasoline	Removed 12/92	RIR	NA	NA
33	9999	2293-U	1954	1974	58	Gasoline	Removed 1974	NI	NA	NA
34	9999	2294-U	1954	1974	58	Gasoline	Removed 1974	NI	NA	NA
35	9998	2305-U	1956	1990	55	Diesel	Removed 10/90	RIR	NA	NA
36	PRE	2315-U	1960	1988	64	Gasoline	Removed 11/89	ISCr	EAR/CAP (2/91)	OE/CAR (12/92)
37	9769	2330-U	1949	1988	5,000	No. 2 fuel oil	Inert filed 1988	NI	NA	NA
38	Chest. Ridge	2336-U	1981	1991	550	Gasoline	Removed 5/91	RIR	NA	NA
39	Buff. Mtn.	2337-U	1972	1990	250	Gasoline	Removed 3/90	IAR, ISCR SIR, SIRI (1/92)	NA	NA
40	9720-13	2338-U	1970	1984	200	Used oil	Removed 7/90	RIR	TBD	TBD
41	9219	2395-U	1964	1977	2,000	No. 2 fuel oil	Removed 6/93	TBD	TBD	TBD

Table 5. (continued)

Directory Location	Tank identification number	Installation date	Out of service date	Capacity (gallons)	Contents	Status	Preliminary investigations(s)	Environmental assessment () date to regulatory agency	Corrective action
42	SYDD 2063-U	1959	1989	130	Oil/solvent	Removed 7/89	IAR, ISCR/FPRR	RCRA	RCRA
43	SYDD 2328-U	1959	1989	475	Oil/solvent	Removed 7/89	IAR, ISCR/FPRR	RCRA	RCRA
44	SYDD 2329-U	1959	1989	475	Oil/solvent	Removed 7/89	IAR, ISCR/FPRR	RCRA	RCRA
<i>Hazardous substance USTs</i>									
45	9767-13	1987	1992	7,500	Methanol	Removed 1/93	CR	NA	NA
46	9418-3	1943	1960	45,000	Solid uranium oxide	Exempt	CERCLA	CERCLA	CERCLA
47	9825-1	1984	In use	240,000	Solid uranium oxide	Exempt	NA	NA	NA

Notes

- BMR = baseline monitoring report
- CAP = corrective action plan
- CAR = corrective action report
- CERCLA = conducted under CERCLA
- CMR = Comprehensive Monitoring Report
- CR = closure report
- EA = environmental assessment
- EAR = Environmental Assessment Report
- FPRR = free product removal report
- IAR = initial abatement report
- ISCR = initial site characterization report
- NA = Not applicable
- NI = Not investigated
- OE = overexcavation
- RCRA = conducted under RCRA, Subtitle C
- RIR = Release Investigation Report
- TBD = to be determined
- SIR = site investigation report
- SRS = site ranking system
- SSSR = site-specific standard request
- SYDD = Salvage Yard Drum Deheader

Table 6. Summary of tank and piping information

Directory Number	Location	Tank Number	TANK INFORMATION				PIPING INFORMATION				Comments	
			Construction Material	PROTECTION			Construction Material	Type	PROTECTION			
				Cathodic	Spill	Overfill			Release	Cathodic		Release
1	9722-6	2312-U	FGL (DW)	NA	N	N	Y	STEEL	S	N	N	Emergency generator tank
2	9722-5	2313-U	FGL (DW)	NA	N	N	Y	STEEL	S	N	N	Emergency generator tank
3	9999-7	2316-U	FGL (SW)	NA	N	N	N	STEEL	S	N	N	Emergency generator tank
4	9999-5	2320-U	FGL (SW)	NA	N	N	N	STEEL	S	N	N	Emergency generator tank
5	9722-4	2333-U	FGL (DW)	NA	N	N	Y	STEEL	S	N	N	Emergency generator tank
6	9714	2334-U	FGL (SW)	NA	Y	Y	Y	FGL (SW)	P	NA	Y	Bulk fuel dispensing
7	9714	2335-U	FGL (SW)	NA	Y	Y	Y	FGL (SW)	P	NA	Y	Bulk fuel dispensing
8	9754-3	2396-U	FGL (DW)	NA	Y	Y	Y	FGL (DW)	P	NA	Y	Bulk fuel dispensing
9	9754-3	2397-U	FGL (DW)	NA	Y	Y	Y	FGL (DW)	P	NA	Y	Bulk fuel dispensing
10	9712	0084-U	STEEL	NA	N	N	N	STEEL	GF	N	N	Used oil collection
11	9204-2	0134-U	STEEL	NA	N	N	N	STEEL	S	N	N	Emergency generator tank
12	9754-2	0439-U	FGL (SW)	NA	N	N	N	FGL (SW)	P	NA	N	Bulk fuel dispensing
13	9754-2	0440-U	FGL (SW)	NA	N	N	N	FGL (SW)	P	NA	N	Bulk fuel dispensing
14	9754	2073-U	STEEL	NA	N	N	N	STEEL	S	NA	N	Dispenser tank
15	9754	2074-U	STEEL	NA	N	N	N	STEEL	S	NA	N	Dispenser tank
16	9754	2075-U	STEEL	NA	N	N	N	STEEL	S	N	N	Dispenser tank
17	9754-1	1219-U	STEEL	NA	N	N	N	GLVZD STL.	S	N	N	Bulk fuel dispensing
18	9754-1	1222-U	STEEL	NA	N	N	N	GLVZD STL.	S	N	N	Bulk fuel dispensing
19	9720-15	2068-U	STEEL	NA	N	N	N	GLVZD STL.	S	N	N	Dispenser tank
20	9754-1	2082-U	STEEL	NA	N	N	N	GLVZD STL.	S	N	N	Bulk fuel dispensing
21	PRW	2310-U	STEEL	NA	N	N	N	STEEL	S	N	N	Emergency generator tank

Table 6. (continued)

Directory Number	Location	Tank Number	TANK INFORMATION				PIPING INFORMATION				Comments	
			Construction Material	PROTECTION			Construction Material	Type	PROTECTION			
				Cathodic	Spill	Overfill			Release	Cathodic		Release
22	9201-01	2331-U	STEEL	NA	N	N	N	STEEL	S	N	N	Dispenser tank
23	9401-3	0713-U	STEEL	NA	N	N	N	STEEL	S	N	N	Back up fuel for Y-12 steam plant
24	9754	0836-U	STEEL	NA	N	N	N	GLVZD STL.	GF	N	N	Converted to bulk oil used storage
25	9204-3	0928-U	ST. STEEL	N	N	N	N	ST. STL	S	N	N	Emergency generator tank
26	9995	2078-U	STEEL	N	N	N	N	STEEL	S	N	N	Emergency generator tank
27	9995	2079-U	STEEL	N	N	N	N	STEEL	S	N	N	Emergency generator tank
28	9996	2080-U	STEEL	N	N	N	N	GLVZD. STL.	S	N	N	Dispenser tank
29	9212	2081-U	STEEL	N	N	N	N	STEEL	S	N	N	Dispenser tank
30	9201-5	2099-U	STEEL	N	N	N	N	GLVZD. STL.	S	N	N	Dispenser tank
31	9929-1	2117-U	STEEL	N	N	N	N	STEEL	S	N	N	Heating oil tank
32	9204-4	2130-U	STEEL	N	N	N	N	GLVZD. STL.	S	N	N	Dispenser tank
33	9999	2293-U	STEEL	N	N	N	N	GLVZD. STL	S	N	N	Emergency generator tank
34	9999	2294-U	STEEL	N	N	N	N	GLVZD. STL.	S	N	N	Emergency generator tank
35	9998	2305-U	ST. STEEL	N	N	N	N	COPPER	S	N	N	Emergency generator tank
36	PRE	2315-U	STEEL	N	N	N	N	COPPER	S	N	N	Emergency generator tank
37	9769	2330-U	STEEL	N	N	N	N	STEEL	S	N	N	Heating oil tank
38	Chst Rdg	2336-U	STEEL	N	N	N	N	STEEL	S	N	N	Emergency generator tank
39	Buff. Mtn.	2337-U	STEEL	N	N	N	N	STEEL	S	N	N	Emergency generator tank
40	9720-13	2338-U	ST. STEEL	N	N	N	N	ST. STEEL	GF	N	N	Used oil collection
41	9219	2395-U	STEEL	N	N	N	N	COPPER	S	N	N	Heating oil tank
42	SYDD	2063-U	CONCRETE	N	N	N	N	NA	GF	N	N	Concrete sump;RCRA

Table 6. (continued)

Directory Number	Location	Tank Number	TANK INFORMATION				PIPING INFORMATION				Comments	
			Construction Material	PROTECTION			Construction Material	Type	PROTECTION			
				Cathodic	Spill	Overfill			Release	Cathodic		Release
43	SYDD	2328-U	CONCRETE	N	N	N	N	N	GF	N	N	Concrete sump;RCRA
44	SYDD	2329-U	CONCRETE	N	N	N	N	N	GF	N	N	Concrete sump;RCRA
45	9767-13	2102-U	STEEL	Y	N	N	N	N	S	N	N	No underground piping; Tank was located within concrete vault
46	9418-3	2072-U	CONCRETE	N	N	N	N	N	NA	N	N	Concrete vault;CERCLA
47	9825-1	2129-U	CONCRETE	N	N	N	N	N	NA	N	N	Concrete vault;CERCLA

DW=double walled
FGL= fiberglass

GF=gravity feed
GLVZD.ST.=galvanized steel

N=no
N/A=not applicable

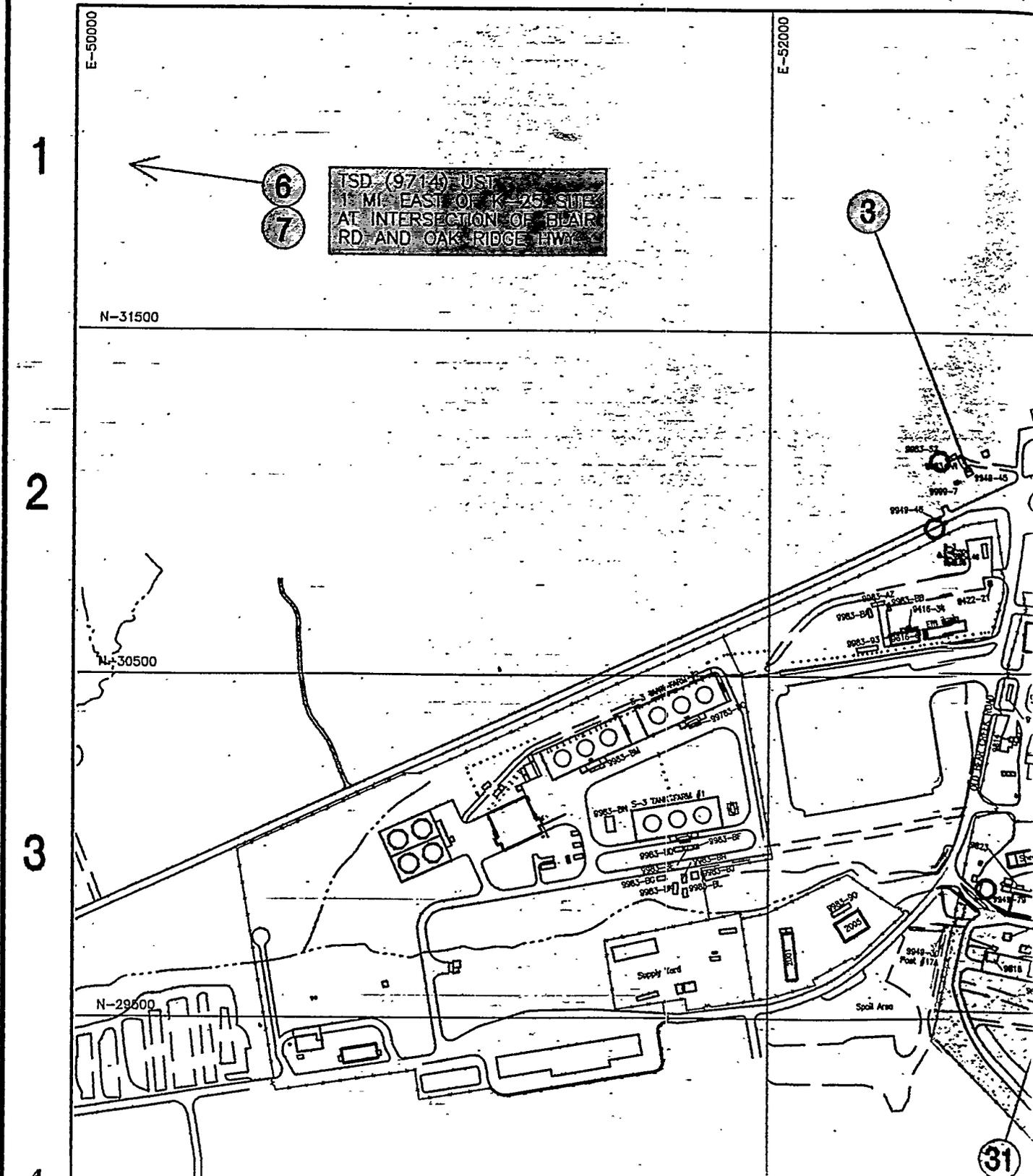
P=presurized
ST. STEEL=stainless steel

S=suction
SW=single walled

Y=yes

OAK

G



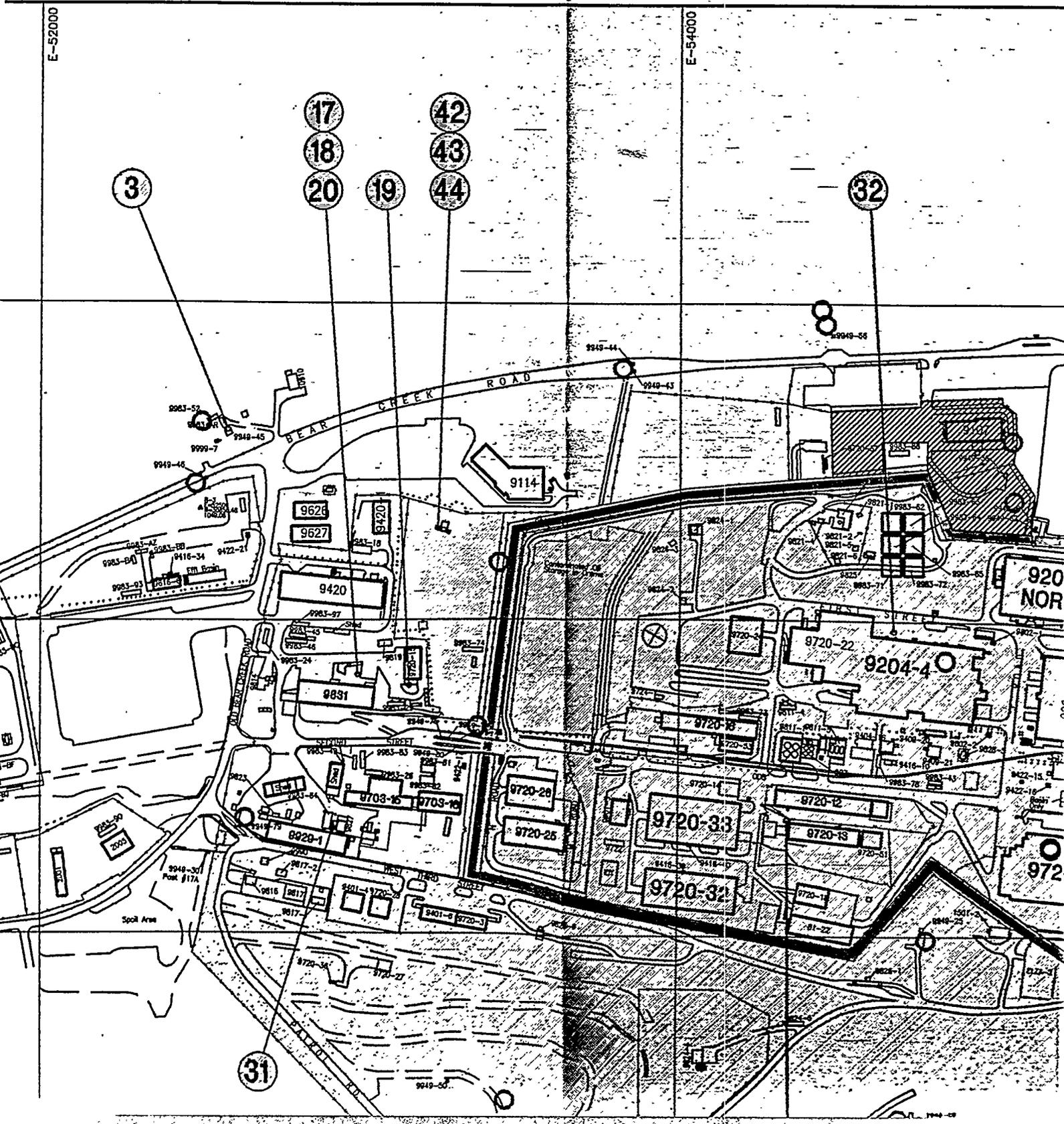
OAK RIDGE Y-12

F

E

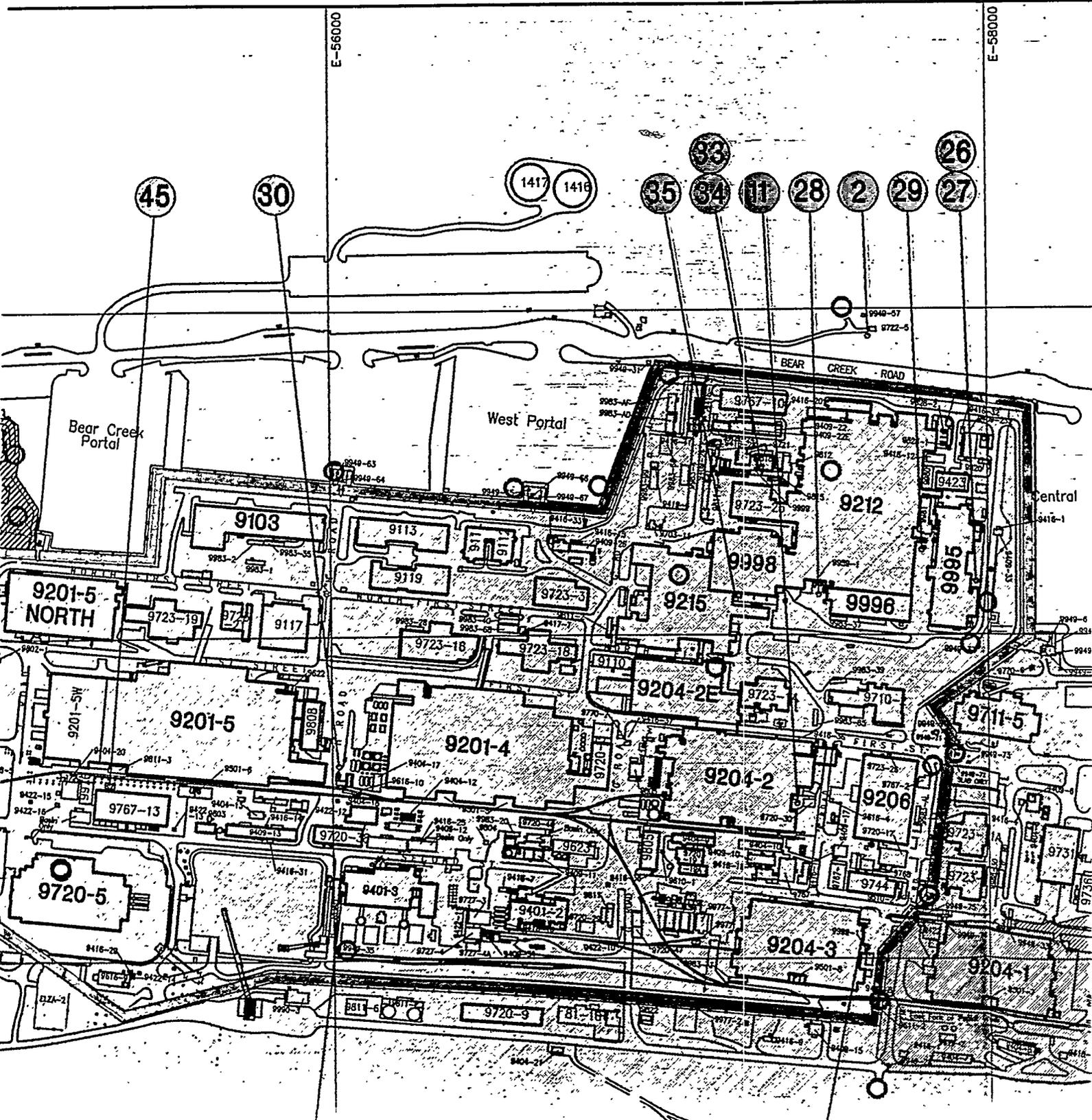
E-52000

E-54000



PLANT - UNDERGR

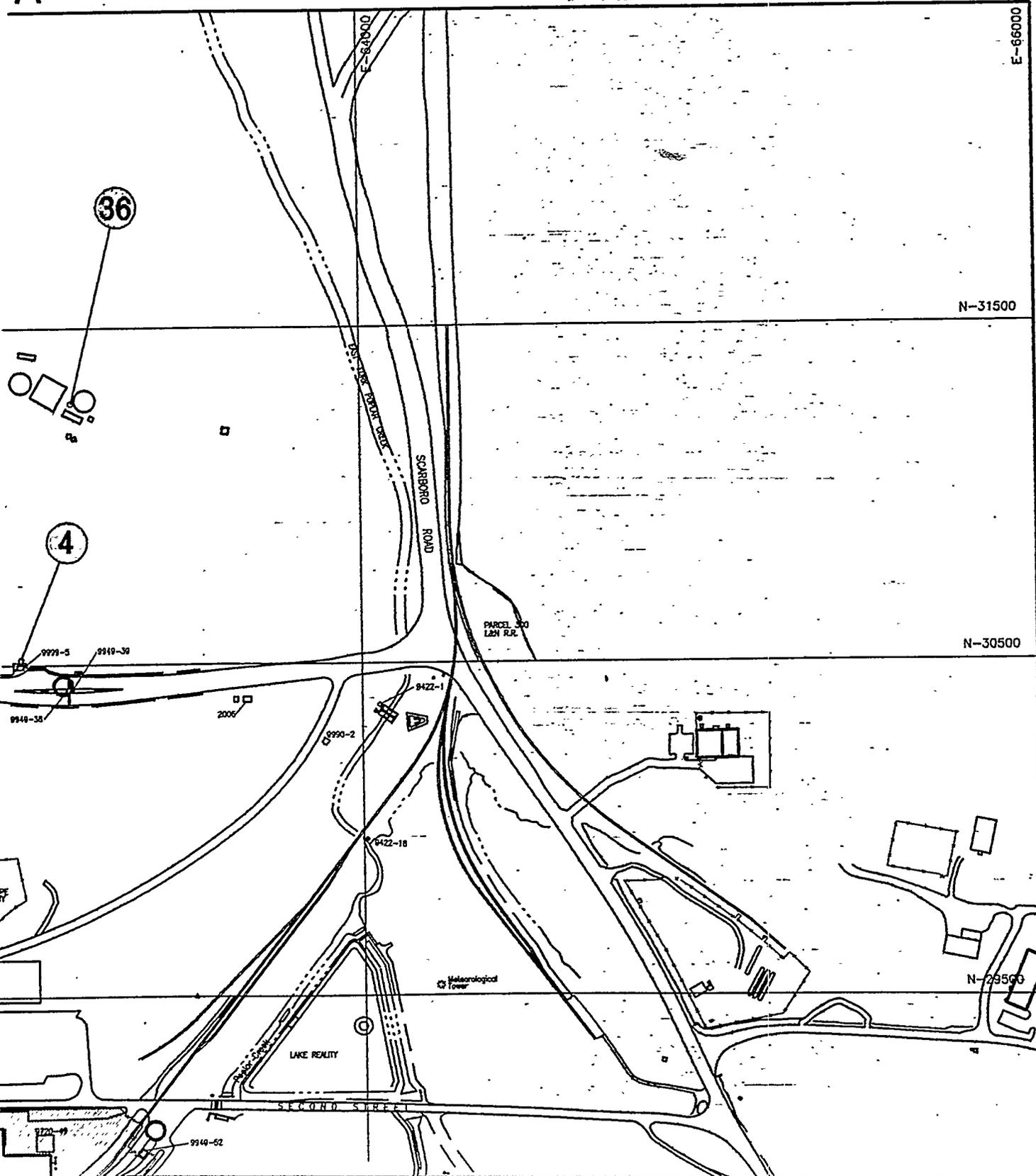
D



TORY

A

AA



1

2

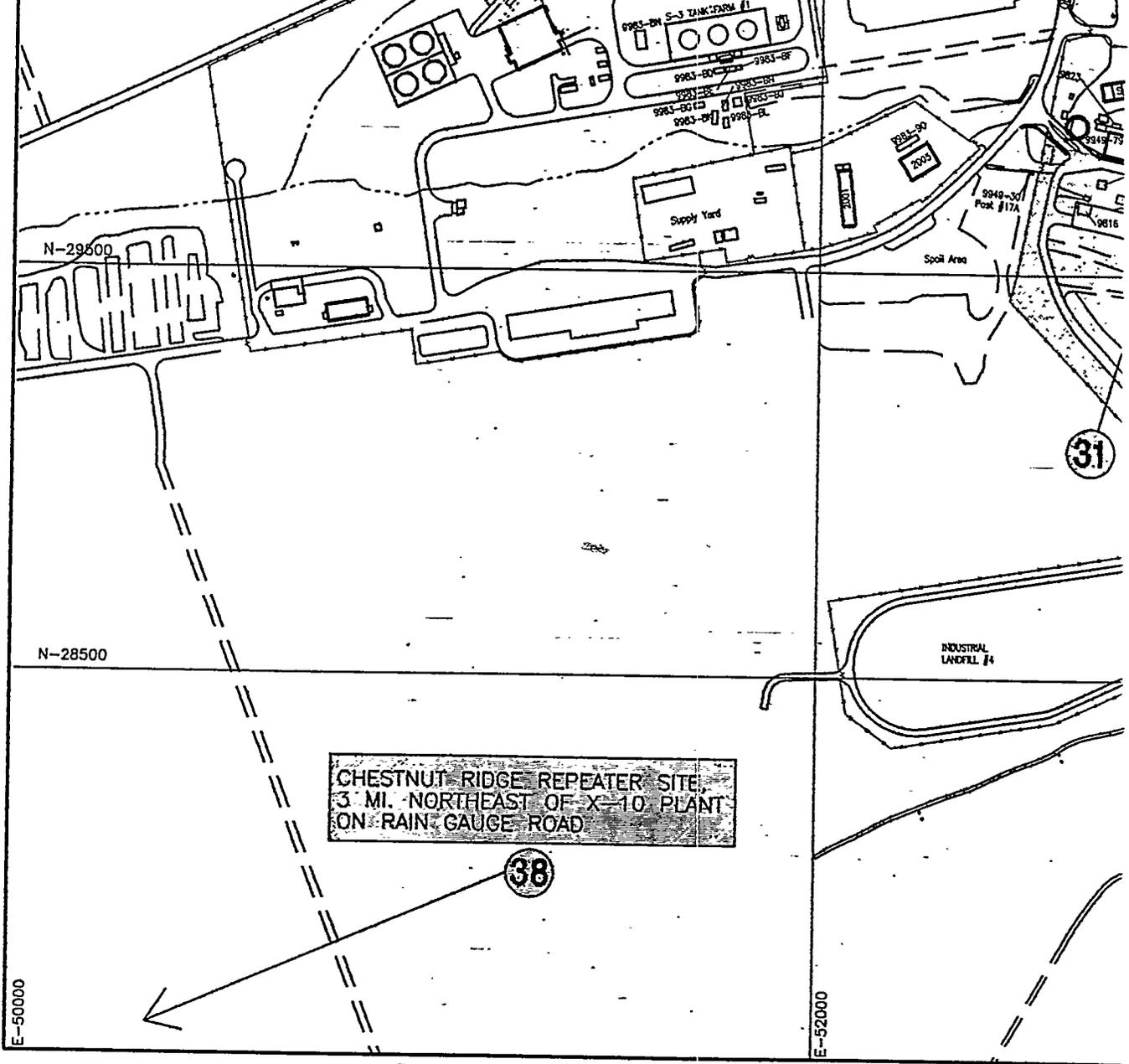
3

4

3

4

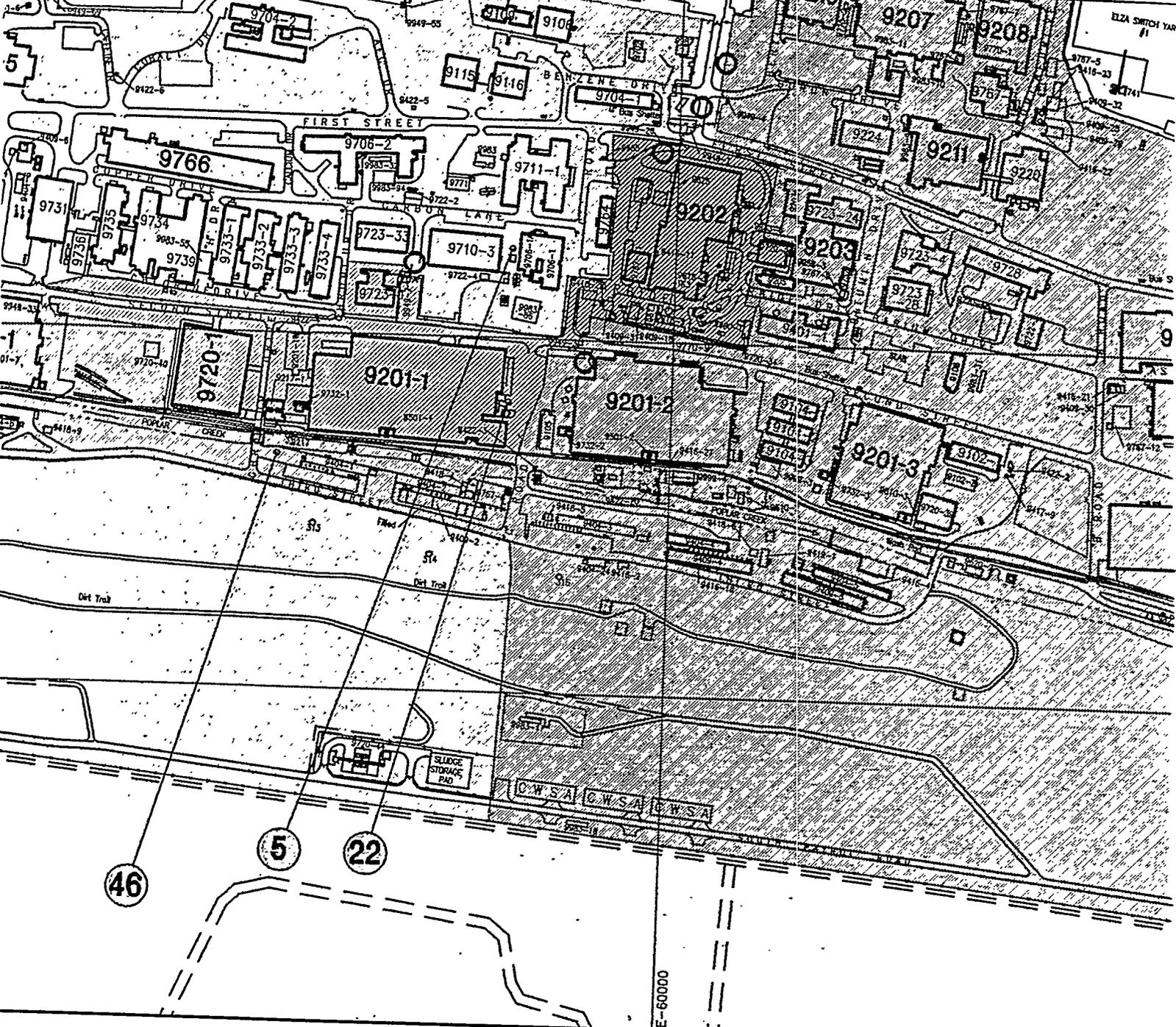
5



CHESTNUT RIDGE REPEATER SITE,
 3 MI. NORTHEAST OF X-10 PLANT
 ON RAIN GAUGE ROAD

G

TANK ID NO.	BLDG. LOC.	CONTENTS	GRID LOC.	TANK ID NO.	BLDG. LO
① 2312-U	9722-6	DIESEL	E4	⑪ 0134-U	9204-2
② 2313-U	9722-5	DIESEL	D2	⑫ 0439-U	9754-2
③ 2316-U	9999-7	DIESEL	F2	⑬ 0440-U	9754-2
④ 2320-U	9999-5	DIESEL	A2	⑭ 2073-U	9754
⑤ 2333-U	9722-4	DIESEL	C3	⑮ 2074-U	9754
⑥ 2334-U	K1140 (9714)	GASOLINE	OFF MAP	⑯ 2075-U	9754
⑦ 2335-U	K1140 (9714)	DIESEL	OFF MAP	⑰ 1219-U	9754-1
⑧ 2396-U	9754-3	DIESEL	B3	⑱ 1222-U	9754-1
⑨ 2397-U	9754-3	GASOLINE	B3	⑲ 2068-U	9720-15
⑩ 0084-U	9712	USED OIL	A3	⑳ 2082-U	9754-1

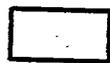
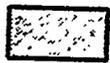


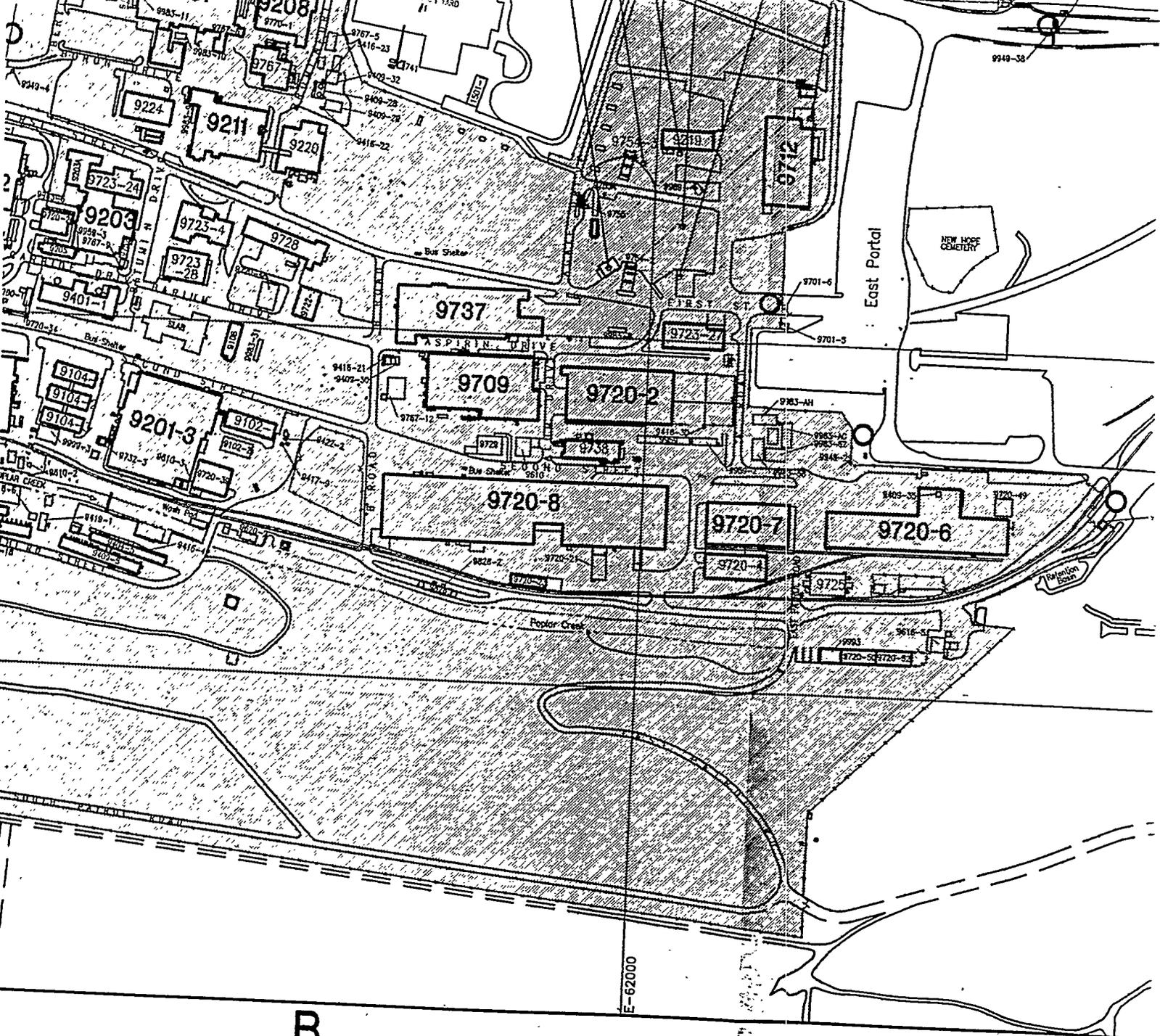
C

B

TANK ID NO.	BLDG. LOC.	CONTENTS	GRID LOC.
④1	2395-U..... 9219	FUEL OIL	A3
④2	2063-U..... SYDD	Haz materials and waste from drums	F2
④3	2328-U..... SYDD	"	F2
④4	2329-U..... SYDD	"	F2
④5	2102-U..... 9767-13	METHANOL	E3
④6	2072-U..... 9418-3	URANIUM OXIDE	C4
④7	2129-U..... CHESTNUT RIDGE	URANIUM OXIDE	E5

LEGEND:

-  PROPERTY PROTECTION AREA
.....CLEARANCE NOT REQUIRED
-  LIMITED AREA
-  ADMINISTRATIVE PEDESTRIAN CONTROL, SECURITY VEHICULAR CONTROL
-  SECURITY PATROL CORRIDOR AND PIDAS
-  SECURITY PATROL FUNCTIONS

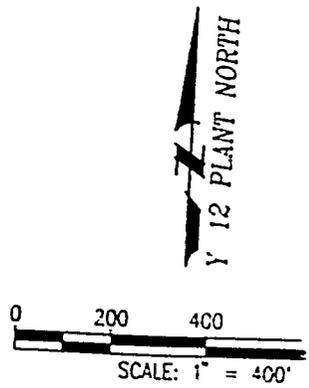


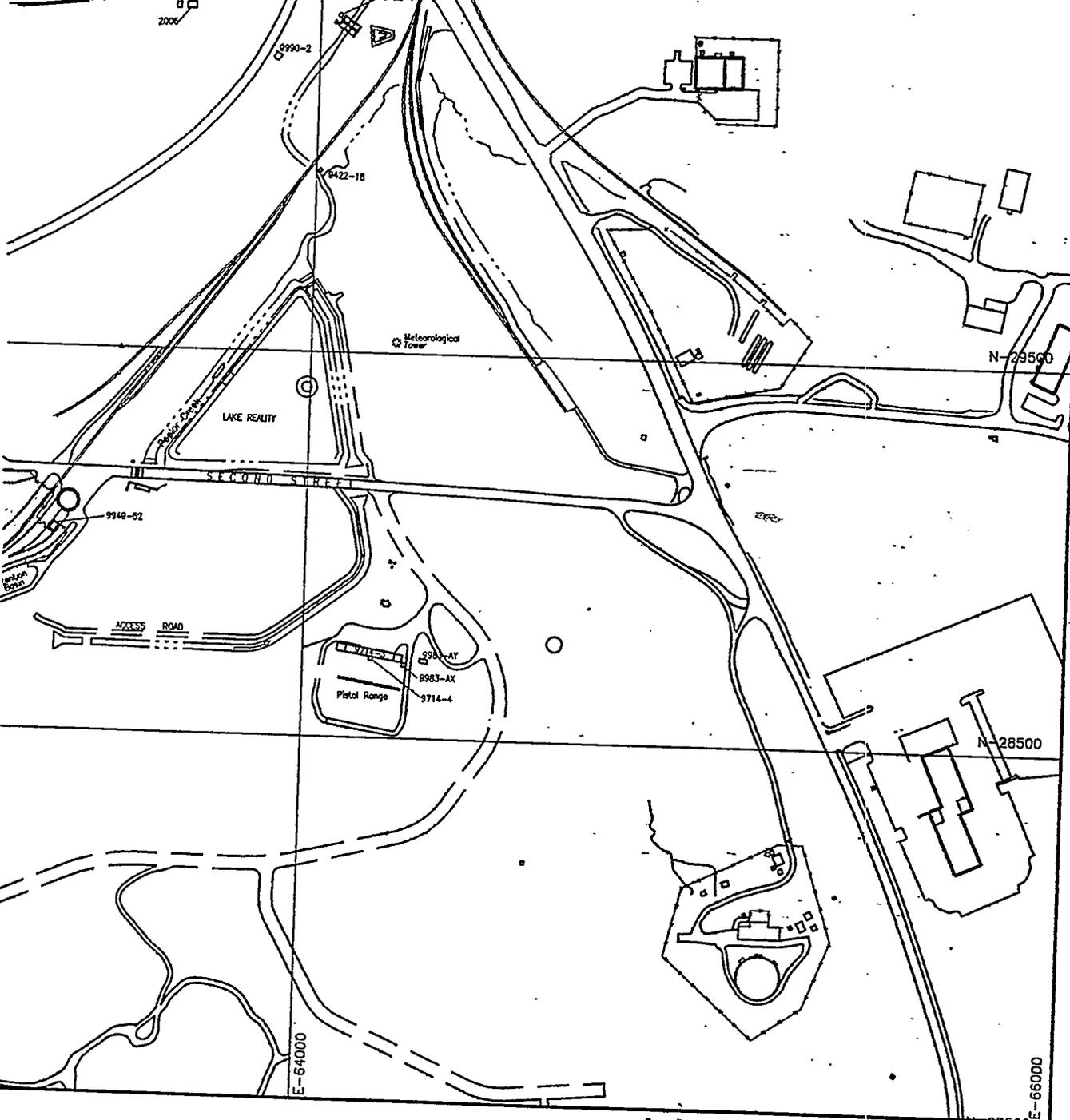
- LEGEND:**
- PROPERTY PROTECTION AREA
CLEARANCE NOT REQUIRED
 - LIMITED AREA
 - ADMINISTRATIVE PEDESTRIAN
CONTROL, SECURITY VEHICULAR
CONTROL
 - SECURITY PATROL CORRIDOR
AND PIDAS
 - SECURITY PATROL FUNCTIONS

- EXCLUSION AREA
- PROTECTED AREA
- BIOLOGY CENTER TECHNOLOGY
TRANSFER AREA

NOTE:

- 1) UST Identification numbers were revised from MMES drawing SFP 260/060192, (PES Geodata Group) 06/01/92.
- 2) Y-12 plant security areas were derived from MMES drawing: Y-DWG 85-1421RA3.



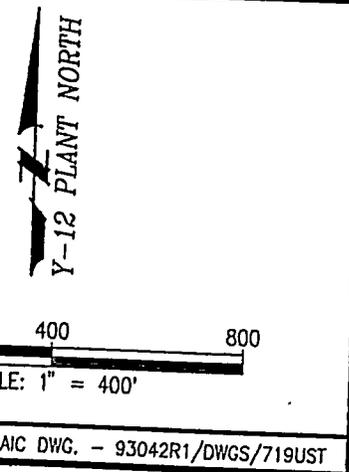


3

4

5

AA



OAK RIDGE Y-12 PLANT UNDERGROUND STORAGE TANK DIRECTORY

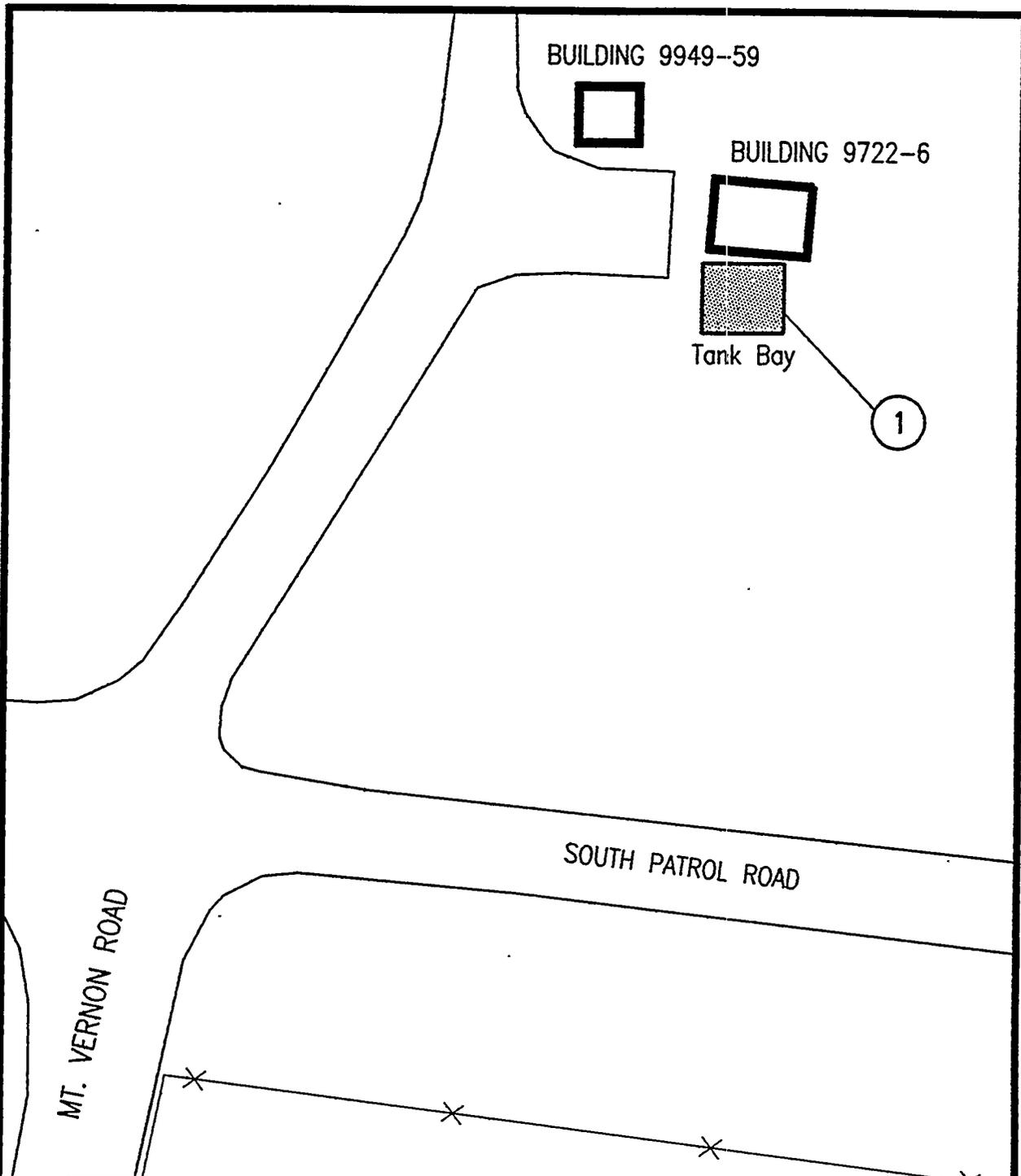
PREPARED FOR

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

BY

Science Applications
International Corporation



LEGEND:

- ① ... UST Directory Number
- ==== Road
- Building
- ** Fence

Y-12 PLANT NORTH

SAC
 Science Applications
 International Corporation

MARTIN MARIETTA

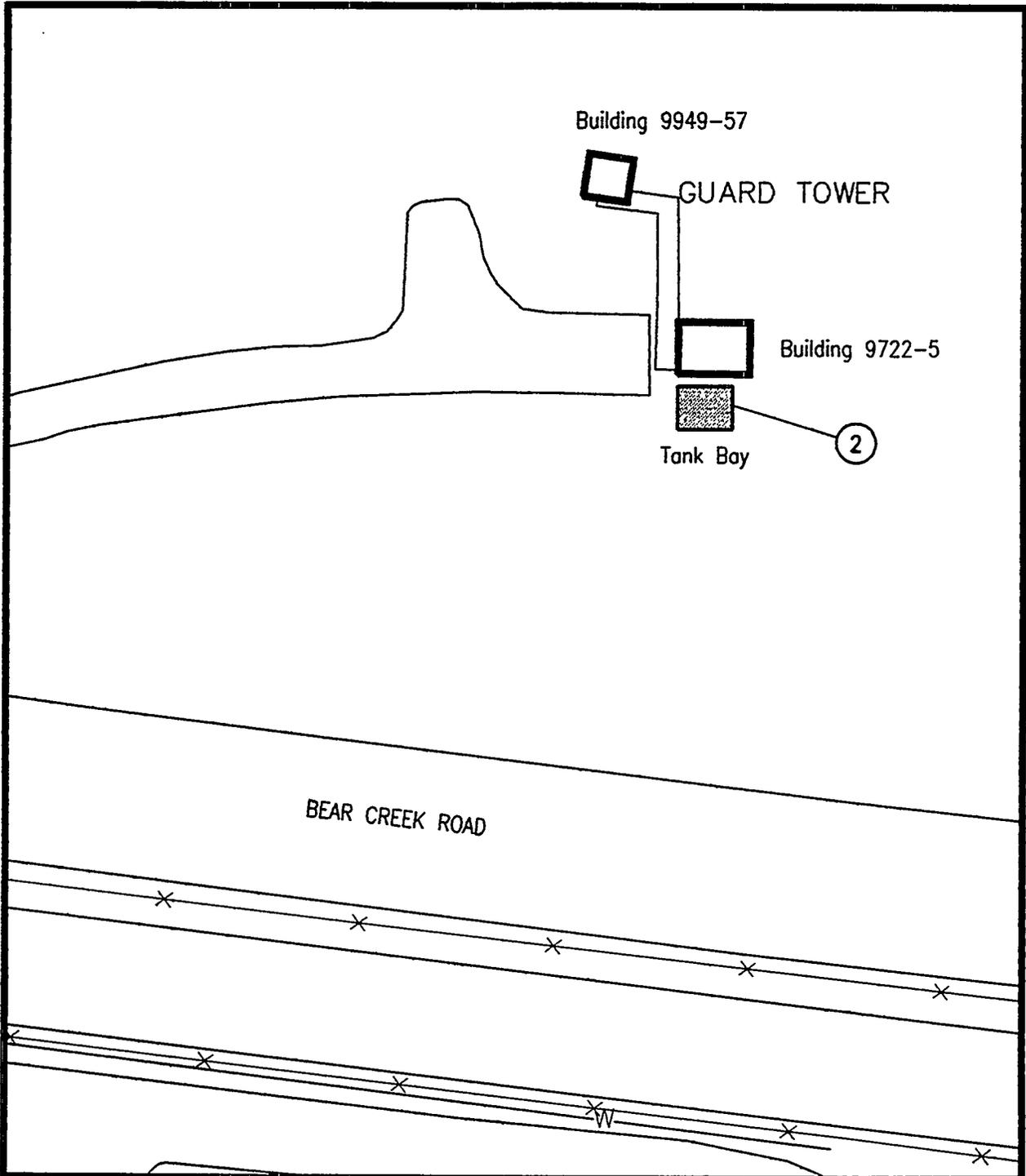
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2312-U BLDG. 9722-6
 CONTENTS: DIESEL

93042R1/DWGS/3061
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

- ② ... UST Directory Number
- ==== ... Road
- ... Building
- * * ... Fence

Y-12 PLANT NORTH

SAC.
 Science Applications
 International Corporation

MARTIN MARIETTA

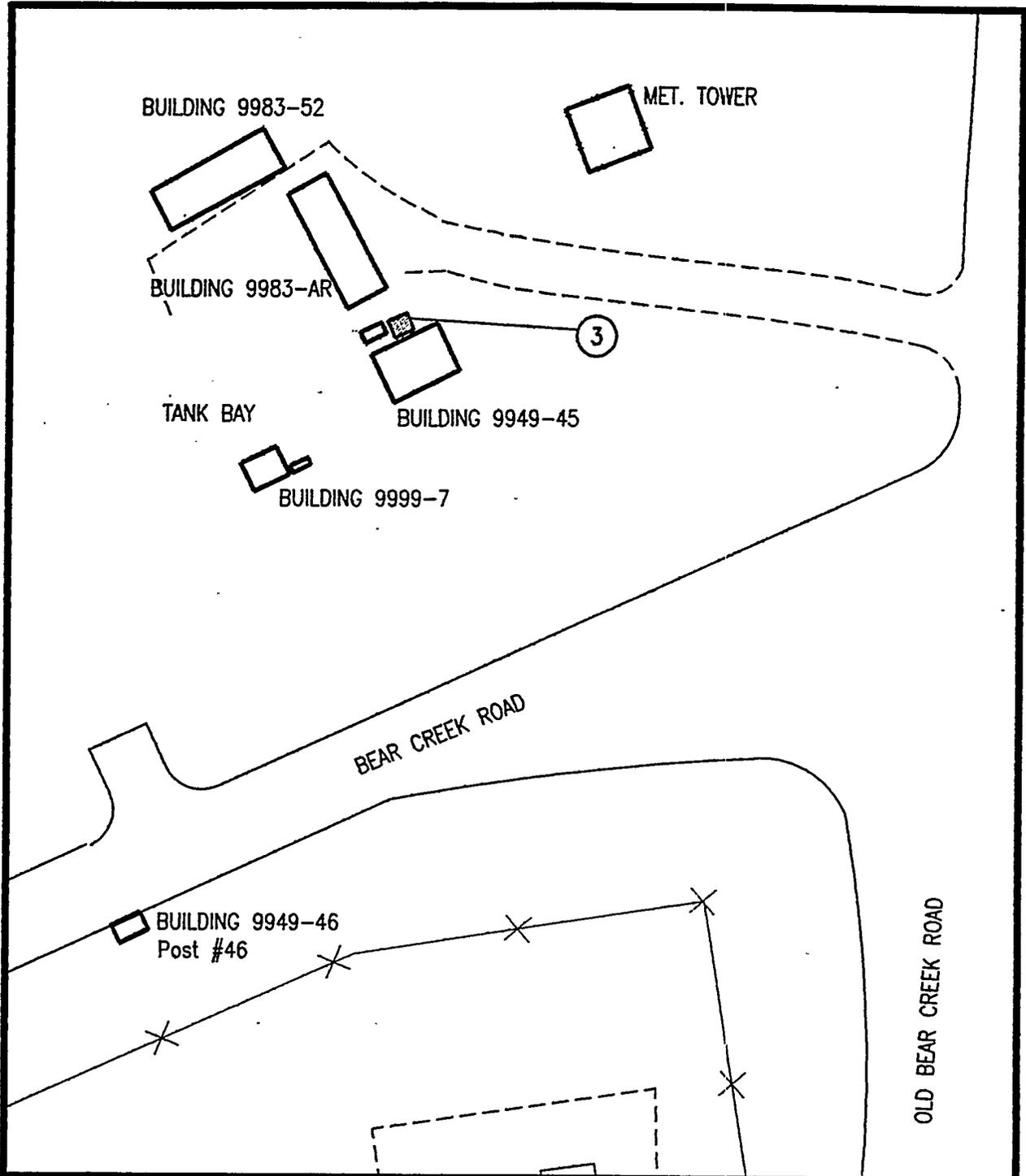
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2313-U BLDG. 9722-5
 CONTENTS: DIESEL

93042R1/DWGS/3062
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

- ③ ... UST Directory Number
- ==== ... Road
- ... Building
- *-* ... Fence

Y-12 PLANT NORTH

SAC
 Science Applications
 International Corporation

MARTIN MARIETTA

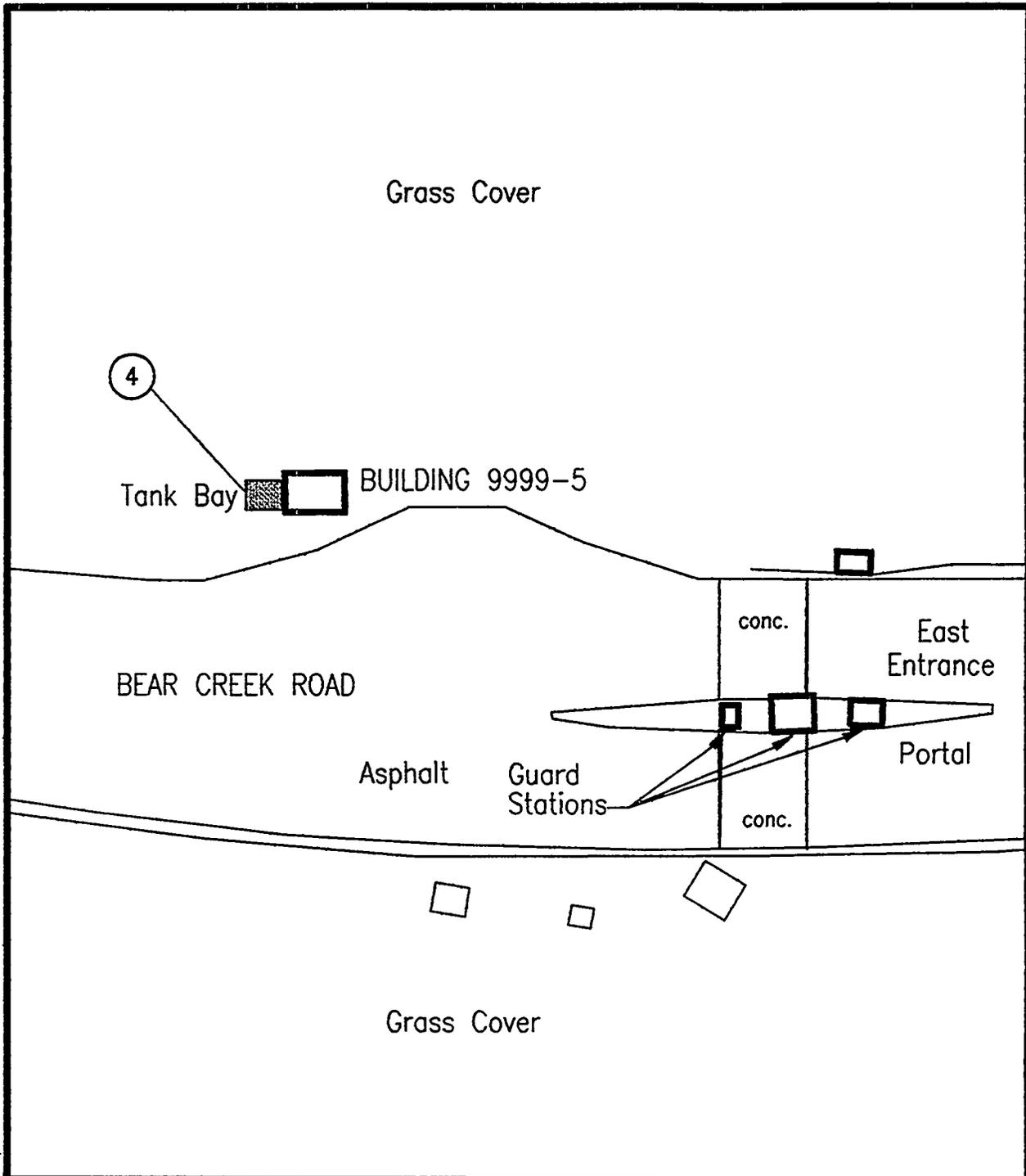
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2316-U BLDG. 9999-7
CONTENTS: DIESEL

93042R1/DKGS/3063
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

- 4 ... UST Directory Number
- ==== ... Road
- ... Building
- * * ... Fence

Y-12 PLANT NORTH



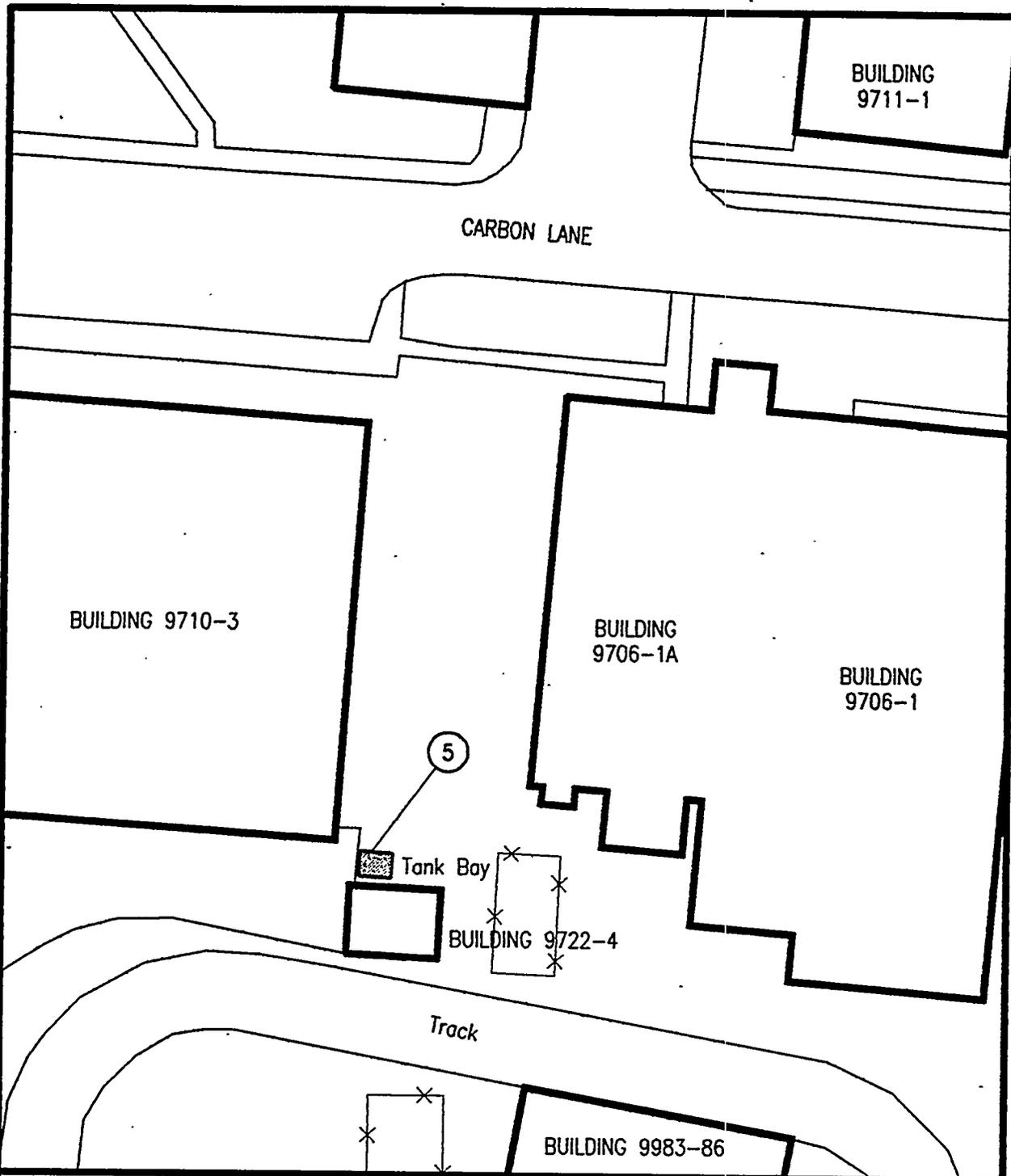
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2320-U BLDG. 9999-5
CONTENTS: DIESEL

93042R1/DWGS/3064
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

- ⑤ ... UST Directory Number
- Road
- Building
- * * Fence

Y-12 PLANT NORTH



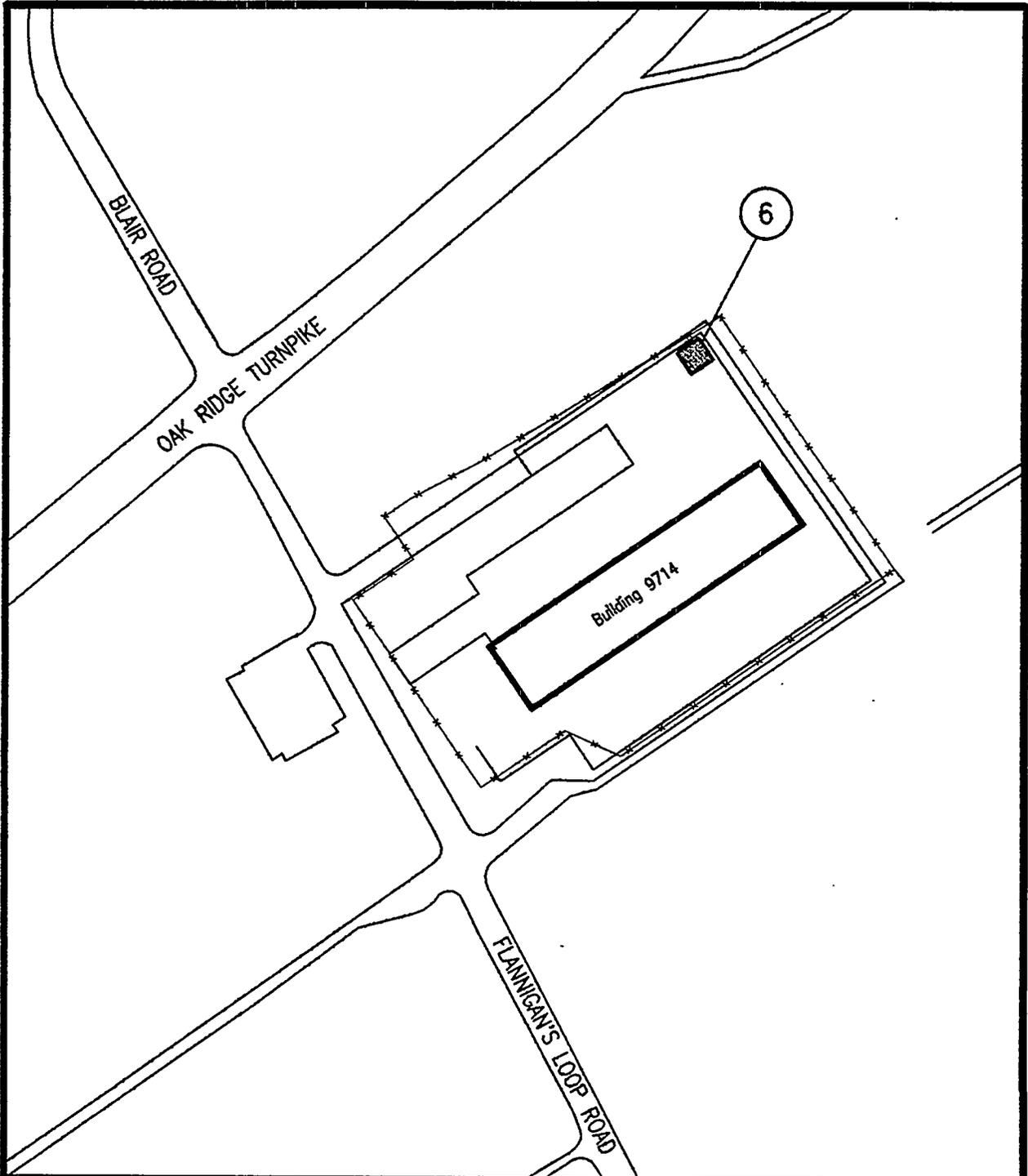
MARTIN MARIETTA
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2333-U BLDG. 9722-4
CONTENTS: DIESEL

93042R1/DWGS/3065
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

- 6 ... UST Directory Number
- ==== Road
- ▭ Building
- xx Fence

Y-12 PLANT NORTH

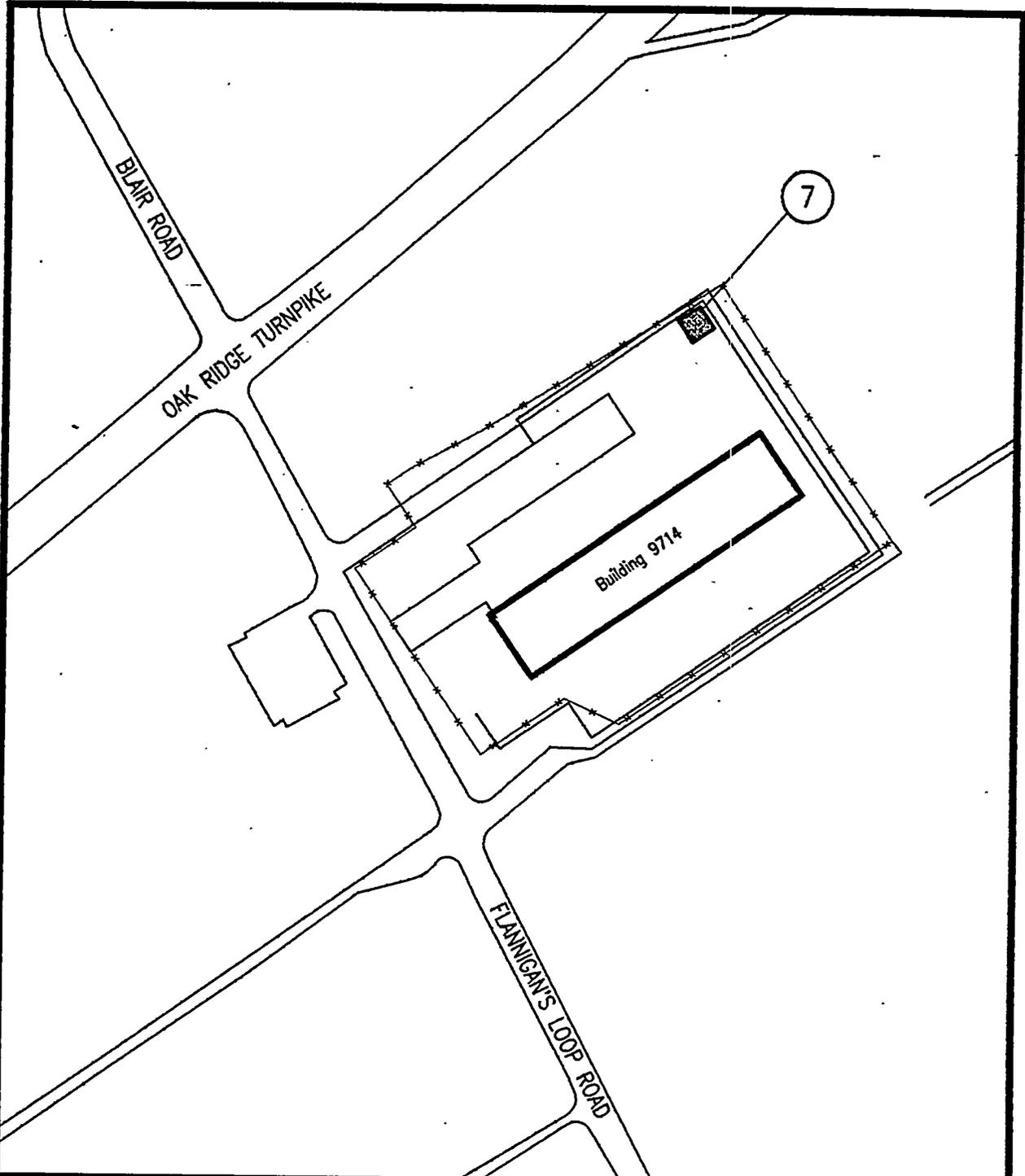


MARTIN MARIETTA
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2334-U 9714
CONTENTS: GASOLINE

93042R1/DWGS/3066 CAD FILE NAME	REV. 1 - 7/22/94 REV. - DATE
------------------------------------	---------------------------------



LEGEND:

-  ... UST Directory Number
-  Road
-  Building
-  Fence

Y-12 PLANT NORTH

SAC.
 Science Applications
 International Corporation

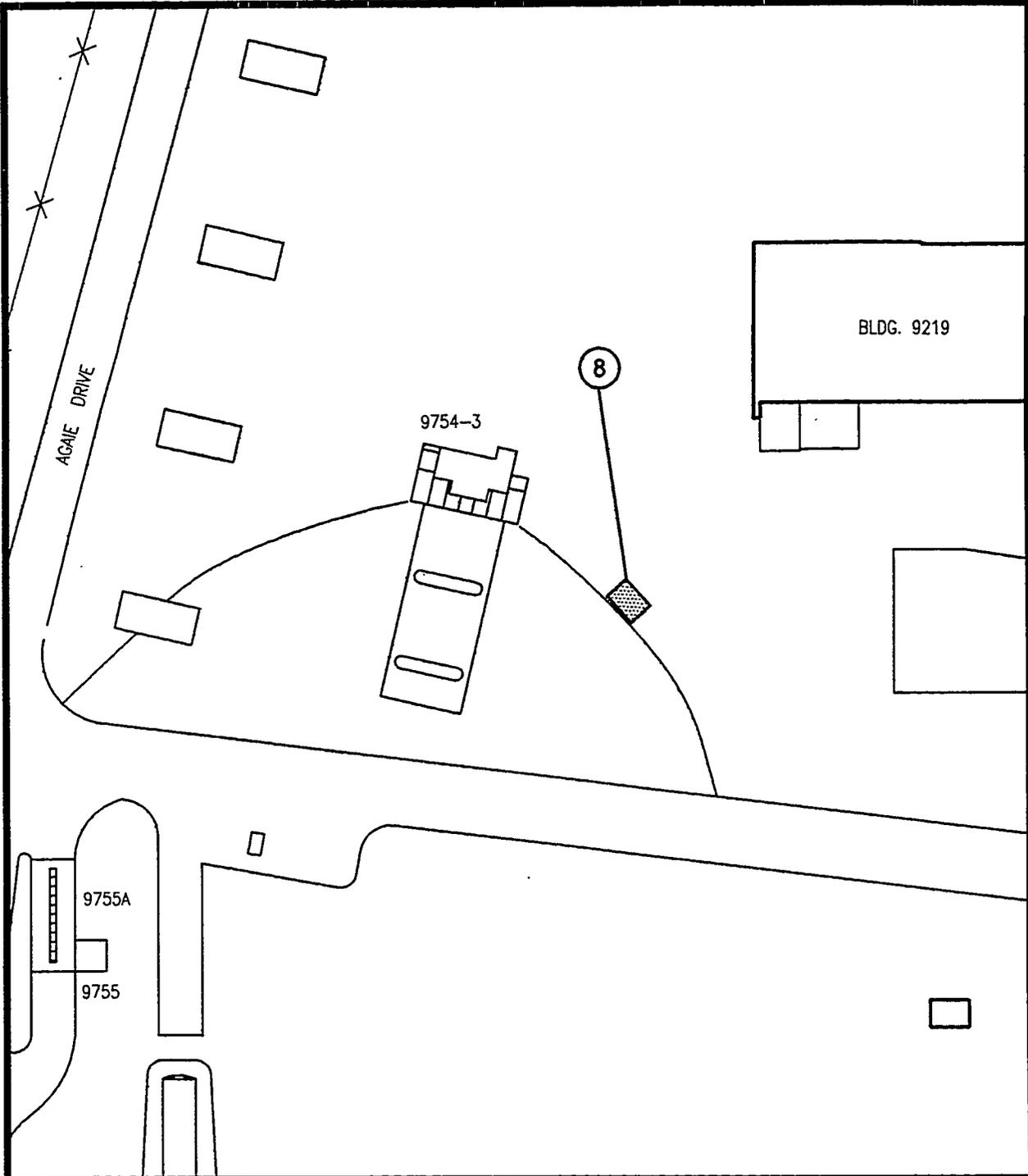
MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2335-U 9714
 CONTENTS: DIESEL

93042R1/DWGS/3067
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

-  ...: UST Directory Number
- Road
-  Building
-  Fence

Y-12 PLANT NORTH

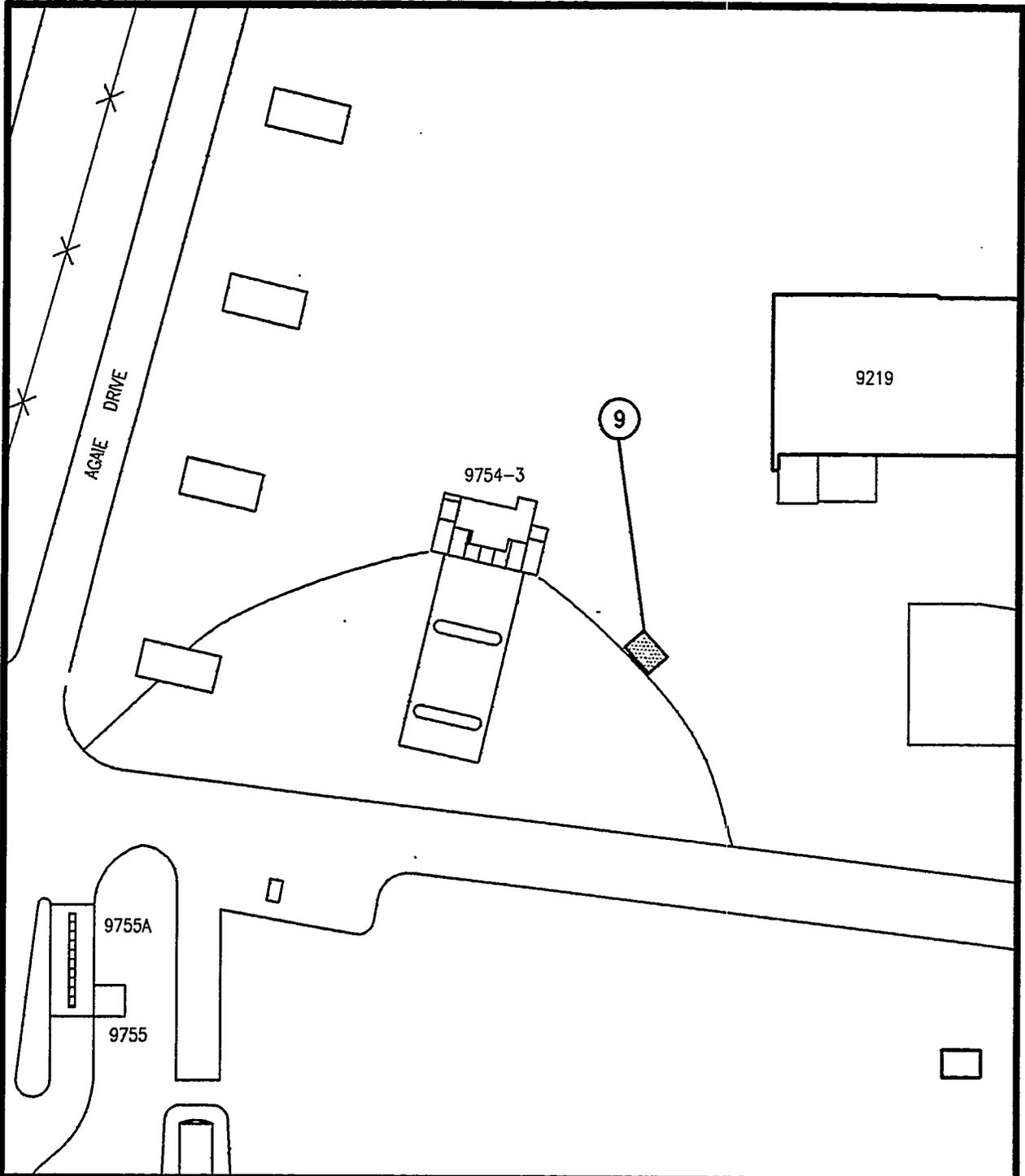


MARTIN MARIETTA
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2396-U BLDG. 9754-3
CONTENTS: DIESEL

93042R1/DWGS/30650	REV. 1 - 7/22/04
CAD FILE NAME	REV. - DATE



LEGEND:

- ⑨ ... UST Directory Number
- ====Road
- Building
- *-* Fence

Y-12 PLANT NORTH

SAC.
 Science Applications
 International Corporation

MARTIN MARIETTA

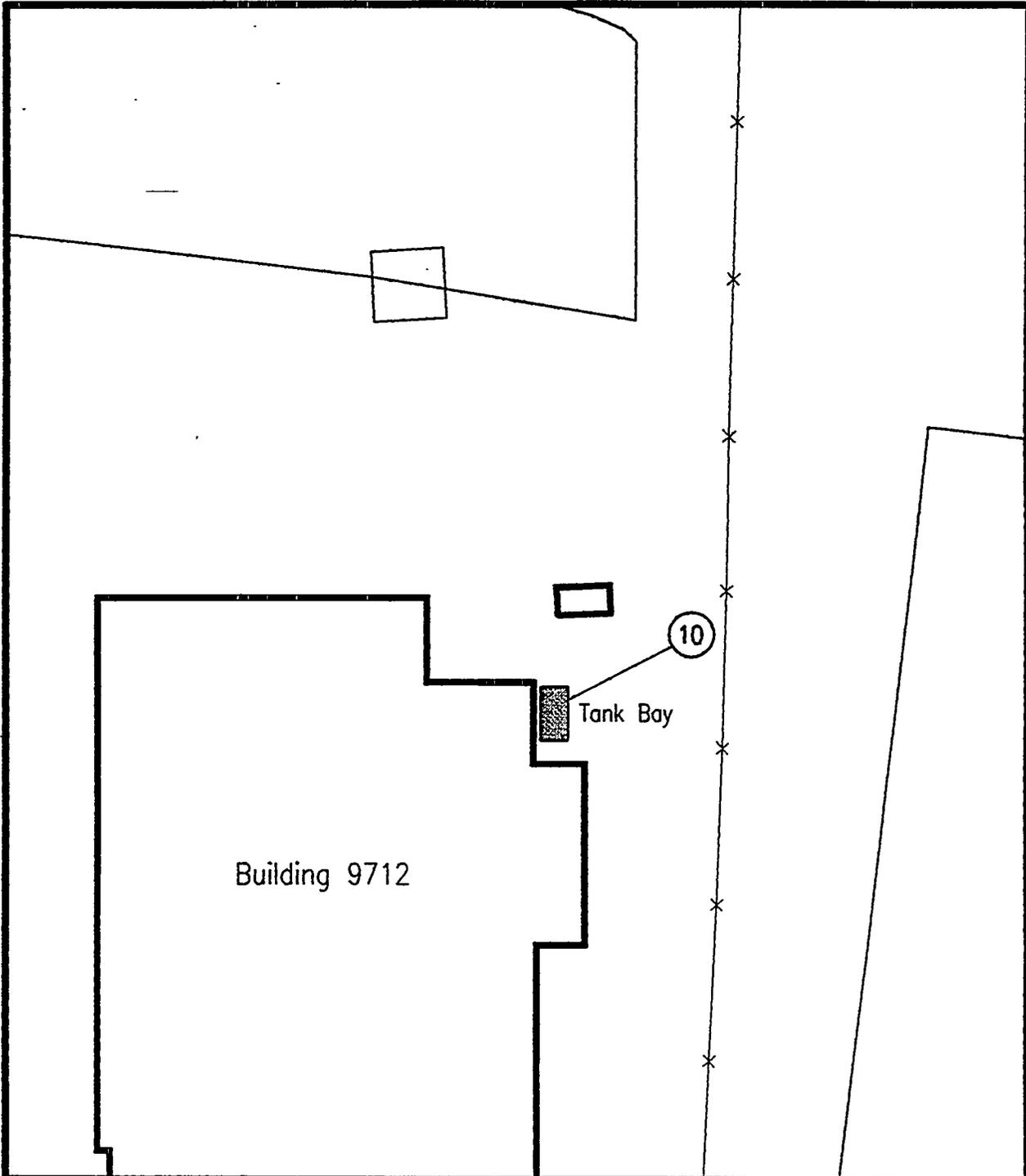
MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2397-U BLDG. 9754-3
 CONTENTS: GASOLINE

93042R1/DWGS/30651
 CAD FILE NAME

REV. 1 - 7/22/94
 REV. - DATE



LEGEND:

- 10 ... UST Directory Number
- ==== Road
- Building
- * * Fence

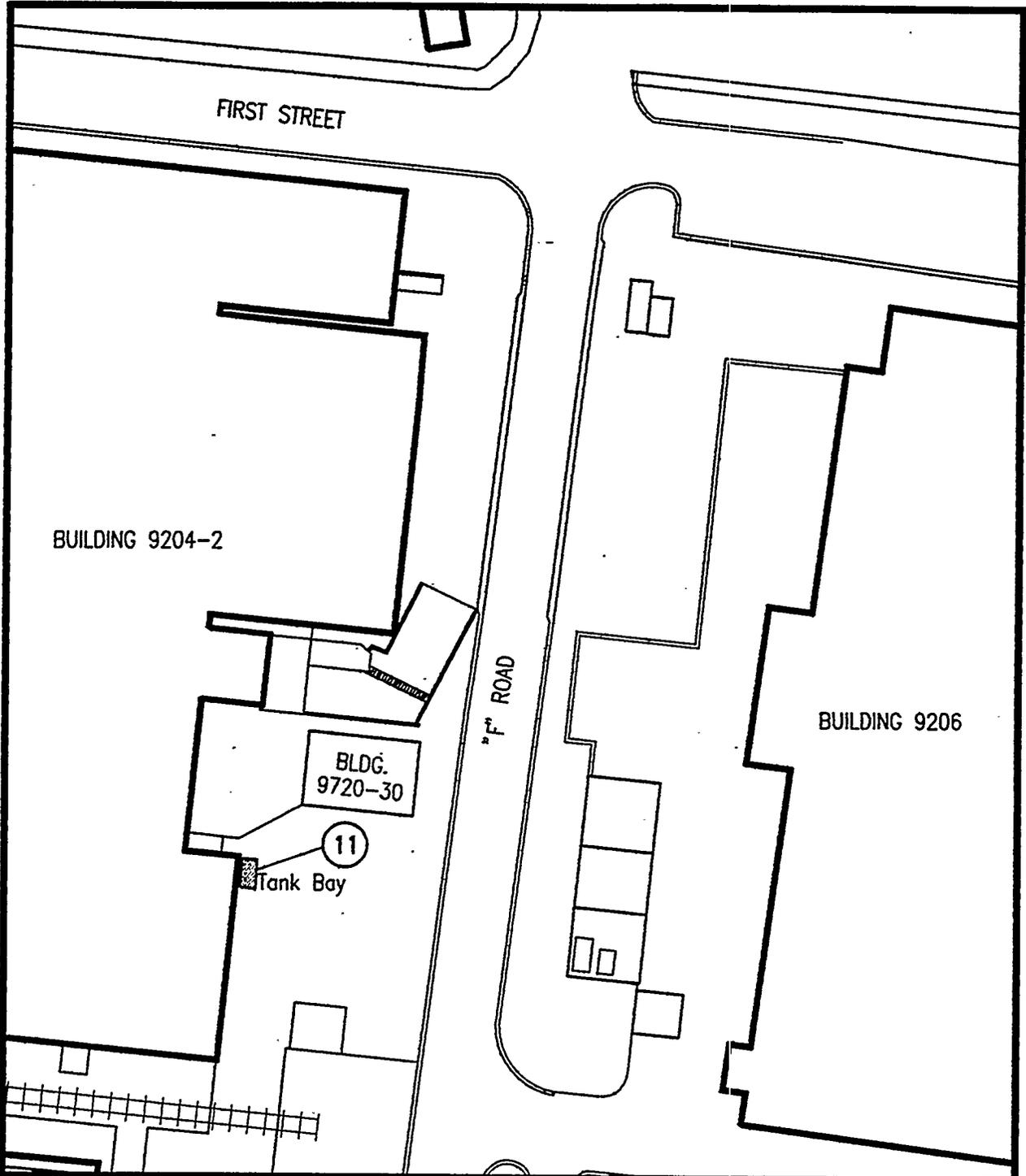
Y-12 PLANT NORTH



NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 0084-U BLDG. 9712
CONTENTS: USED OIL

93042R1/DWGS/30621	REV. 1 - 5/27/94
CAD FILE NAME	REV. - DATE



LEGEND:

- 11 ... UST Directory Number
- ==== ... Road
- ▭ ... Building
- x-x- ... Fence

Y-12 PLANT NORTH

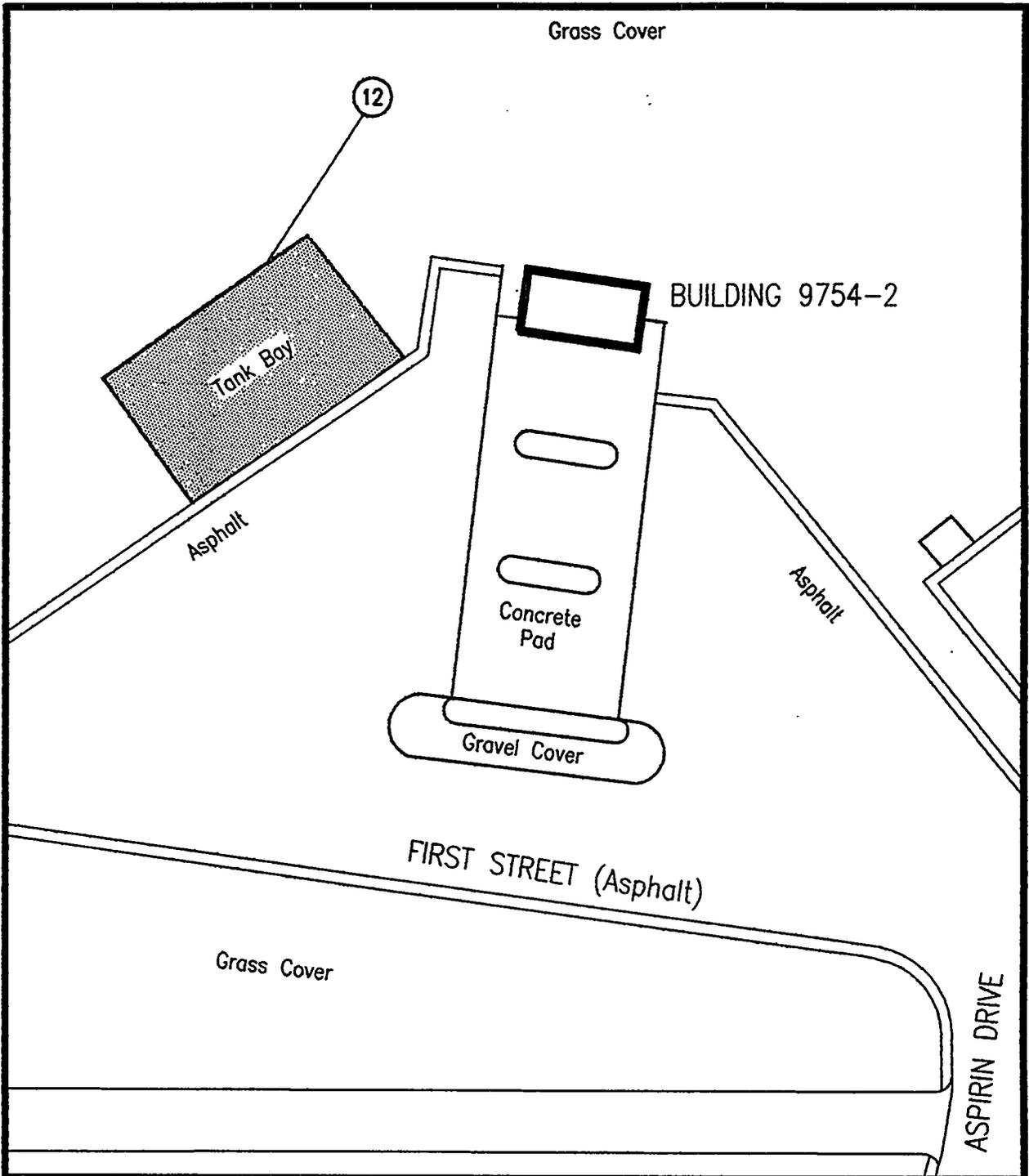


MARTIN MARIETTA
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 0134-U BLDG. 9204-2
CONTENTS: GASOLINE

93042R1/DWGS/30622	REV. 1 - 7/20/94
CAD FILE NAME	REV. - DATE



LEGEND:

- ⑫ ... UST Directory Number
- ==== ... Road
- ... Building
- ×× ... Fence

Y-12 PLANT NORTH

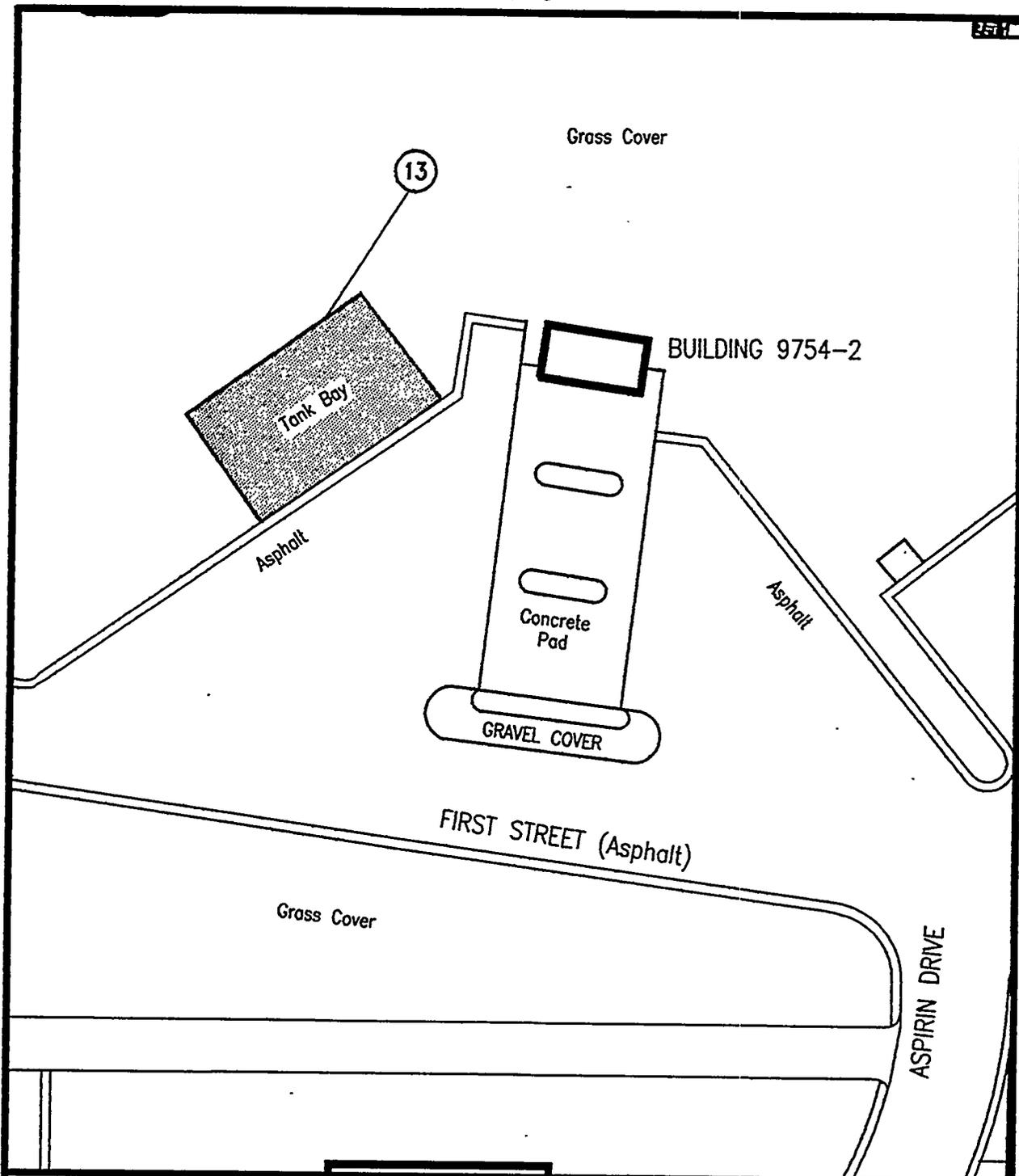
SAC
 Science Applications
 International Corporation

MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 0439-U BLDG. 9754-2
 CONTENTS: GASOLINE

93042R1/DWGS/30623	REV. 1 - 7/20/94
CAD FILE NAME	REV. - DATE



LEGEND:

- (13) ... UST Directory Number
- — — — — Road
- Building
- x-x- Fence

Y-12 PLANT NORTH

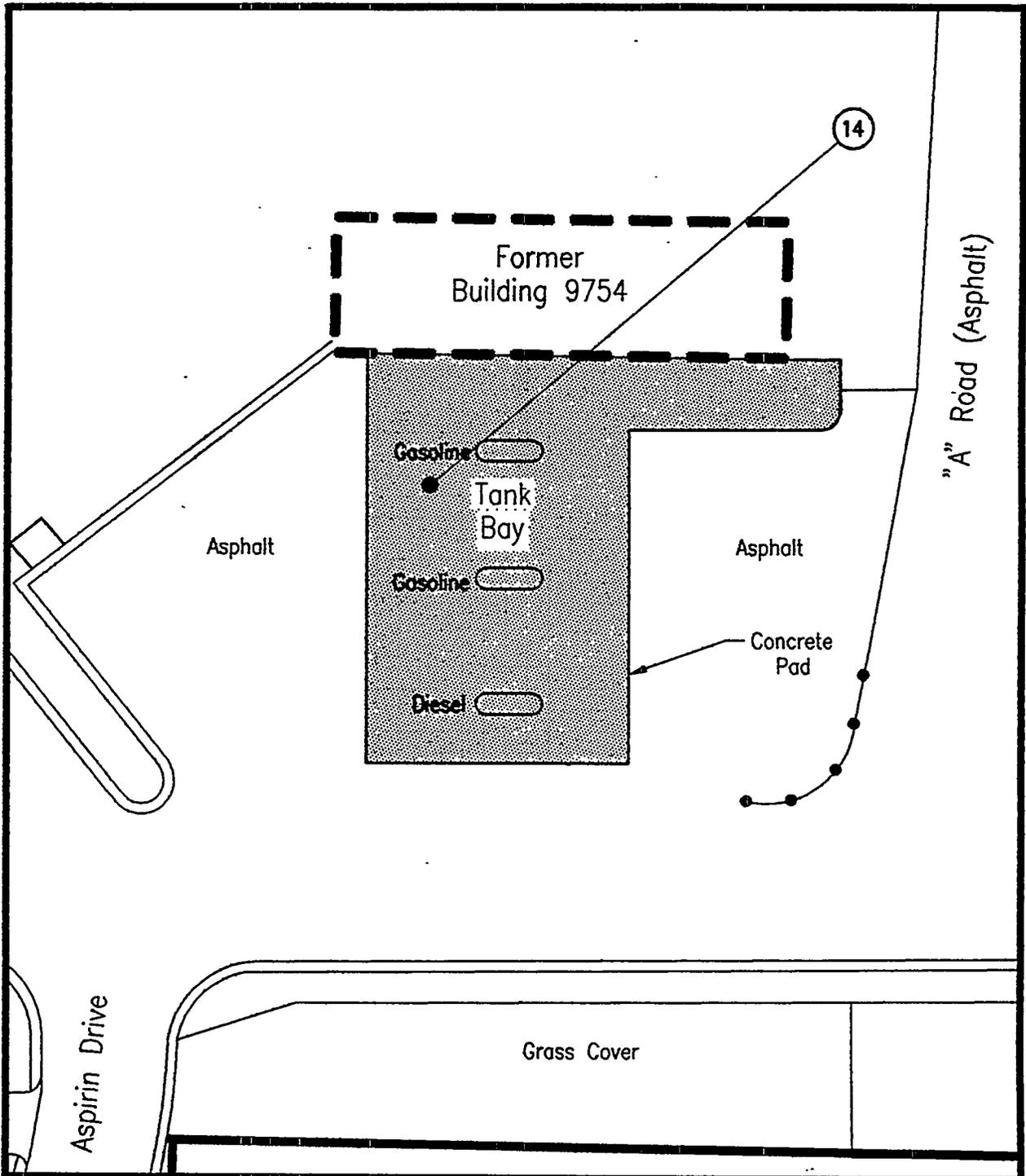
SAC
 Science Applications
 International Corporation

MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 0440-U BLDG. 9754-2
 CONTENTS: DIESEL

93042R1/DWGS/30624	REV. 1 - 7/20/94
CAD FILE NAME	REV. - DATE



LEGEND:

- ①④ ... UST Directory Number
- ==== Road
- Building
- *** Fence

Y-12 PLANT NORTH

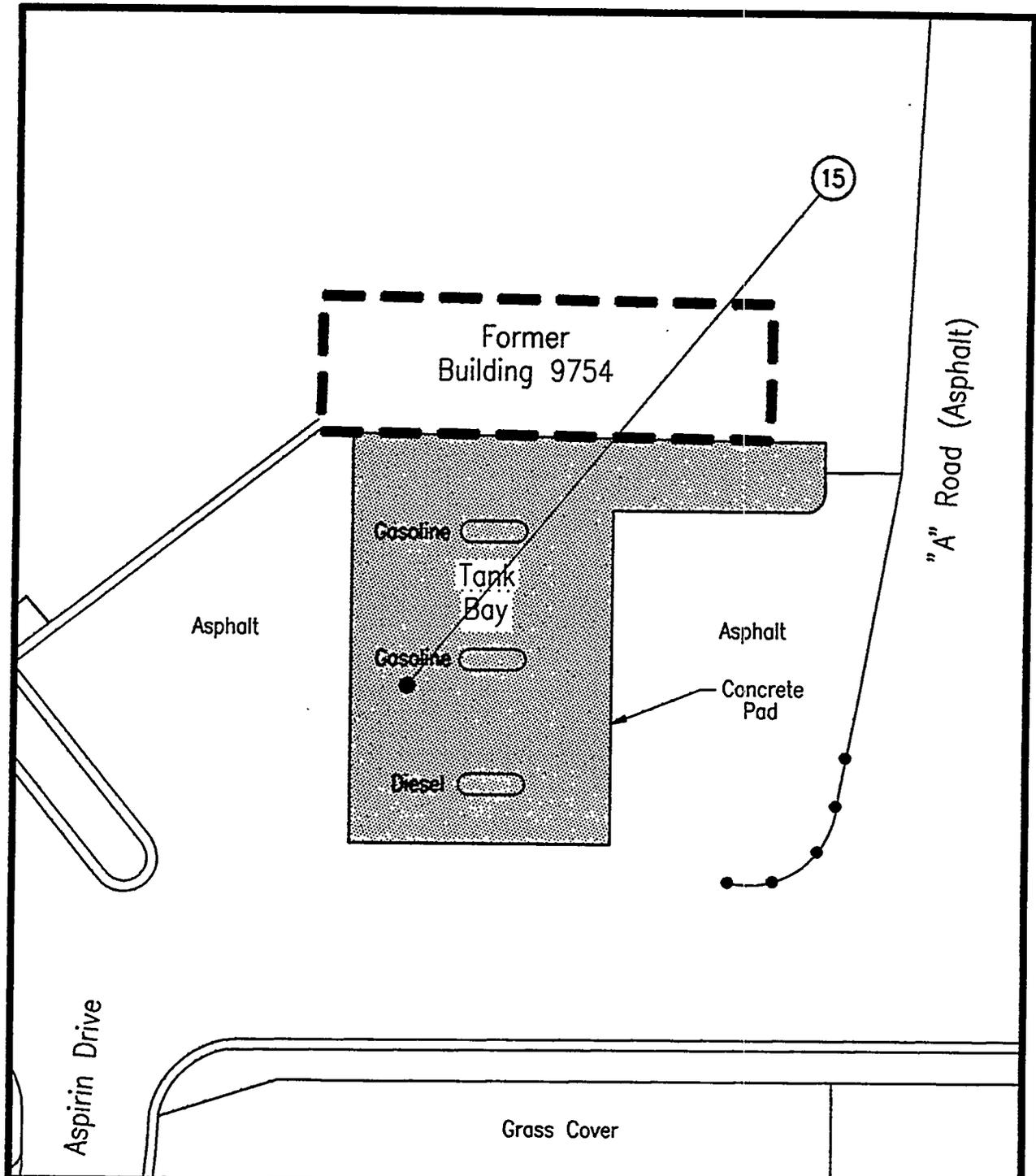
SAC
 Science Applications
 International Corporation

MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2073-U BLDG. 9754
 CONTENTS: GASOLINE

93042R1/DWGS/30612 REV. 1 - 7/22/94
 CAD FILE NAME REV. - DATE



LEGEND:

- (15) ... UST Directory Number
- ==== ... Road
- ... Building
- * * ... Fence

Y-12 PLANT NORTH

SAC
 Science Applications
 International Corporation

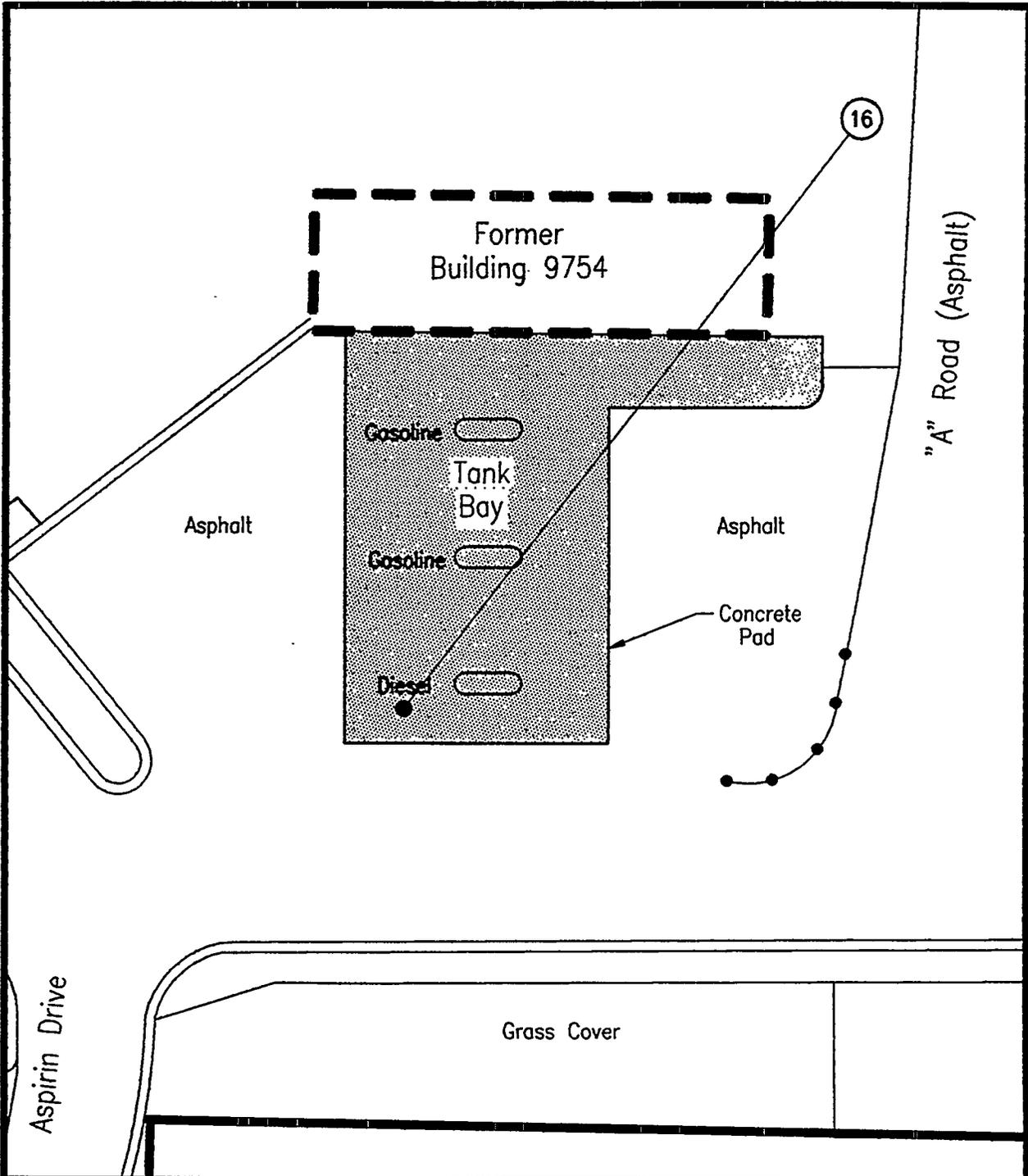
MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2074-U BLDG. 9754
 CONTENTS: GASOLINE

9304281/DWGS/30613
 CAD FILE NAME

REV. 1 - 7/22/94
 REV. - DATE



LEGEND:

- (16) ... UST Directory Number
- Road
- Building
- ** Fence

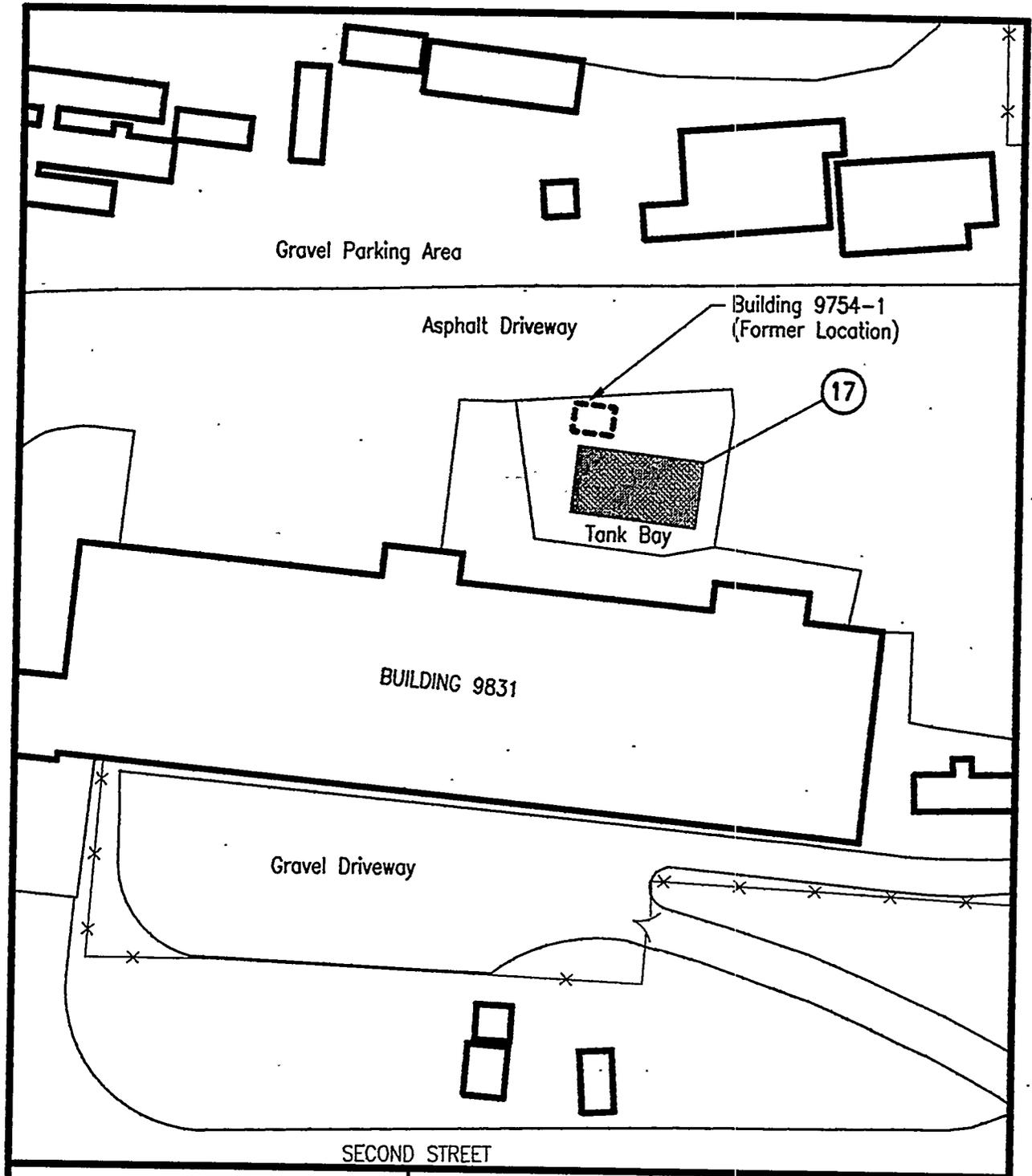
Y-12 PLANT NORTH



NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2075-U BLDG. 9754
CONTENTS: DIESEL

93042R1/DWGS/30614 REV. 1 - 7/22/94
CAD FILE NAME REV. - DATE



LEGEND:

- (17) ... UST Directory Number
- ==== Road
- Building
- *-* Fence

Y-12 PLANT NORTH

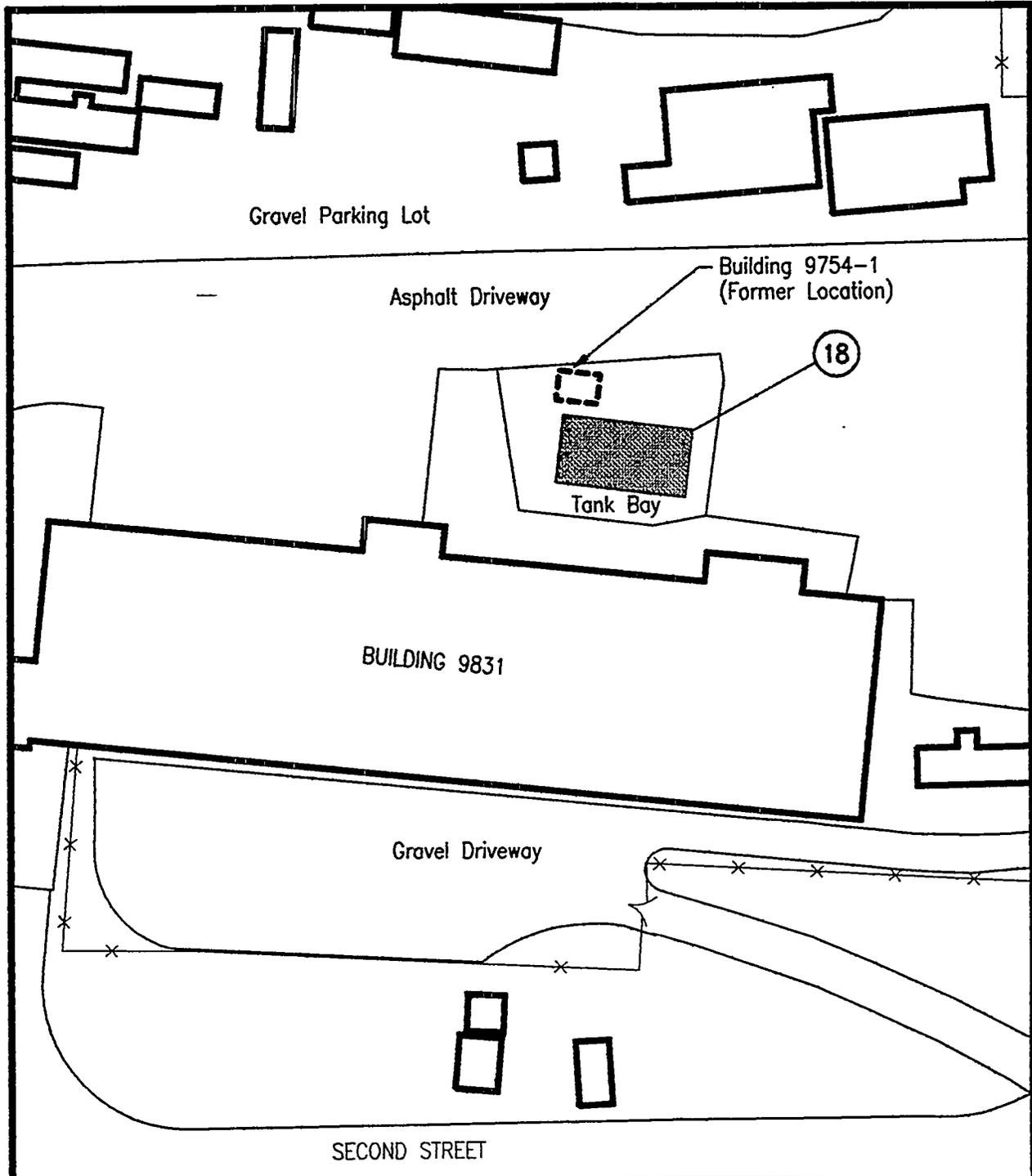


MARTIN MARIETTA
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 1219-U BLDG. 9754-1
CONTENTS: DIESEL

93042R1/DWGS/30628	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



LEGEND:

- (18) ... UST Directory Number
-Road
- Building
- *-* Fence

Y-12 PLANT NORTH

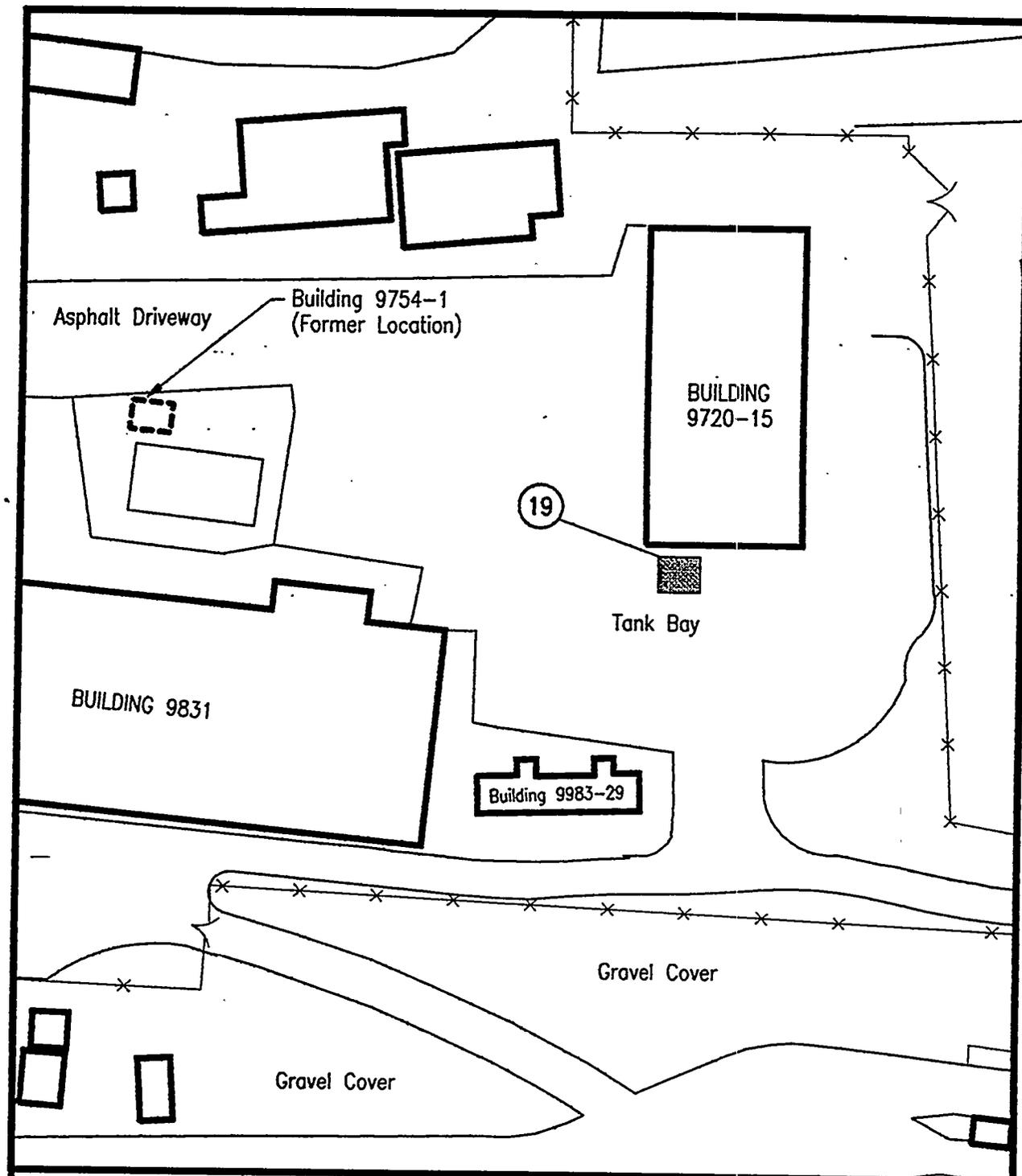
SAE
 Science Applications
 International Corporation

MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 1222-U BLDG. 9754-1
 CONTENTS: GASOLINE

93042R1/DWGS/30629	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



LEGEND:

- 19 ... UST Directory Number
- Road
- Building
- xx Fence

Y-12 PLANT NORTH

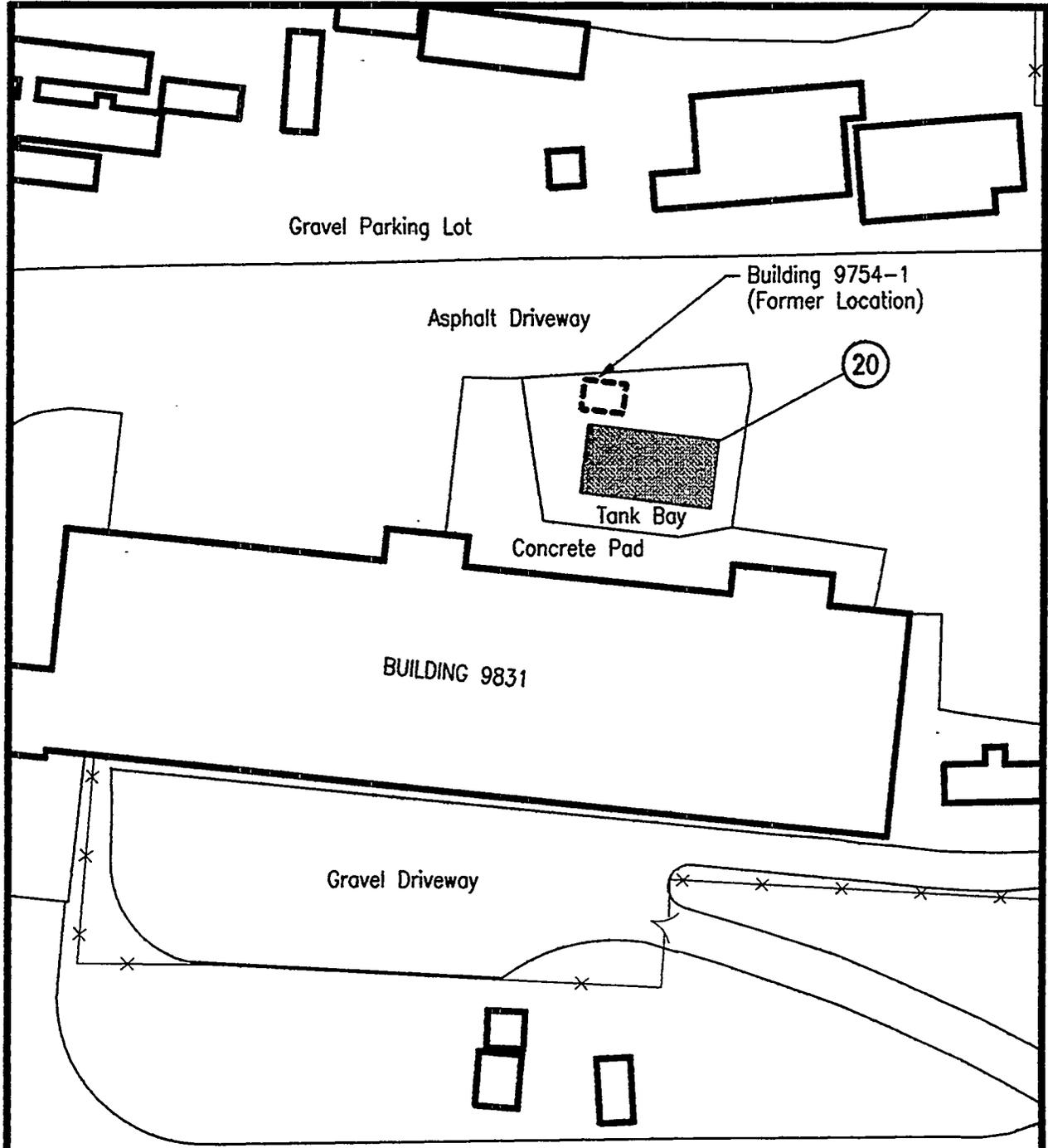
SAC
 Science Applications
 International Corporation

MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

93042R1/DWGS/30630	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE

OAK RIDGE Y-12 PLANT
 UST 2068-U BLDG. 9720-15
 CONTENTS: GASOLINE



STREET

SECOND STREET

LEGEND:

- 20 ... UST Directory Number
- Road
- Building
- ×× Fence

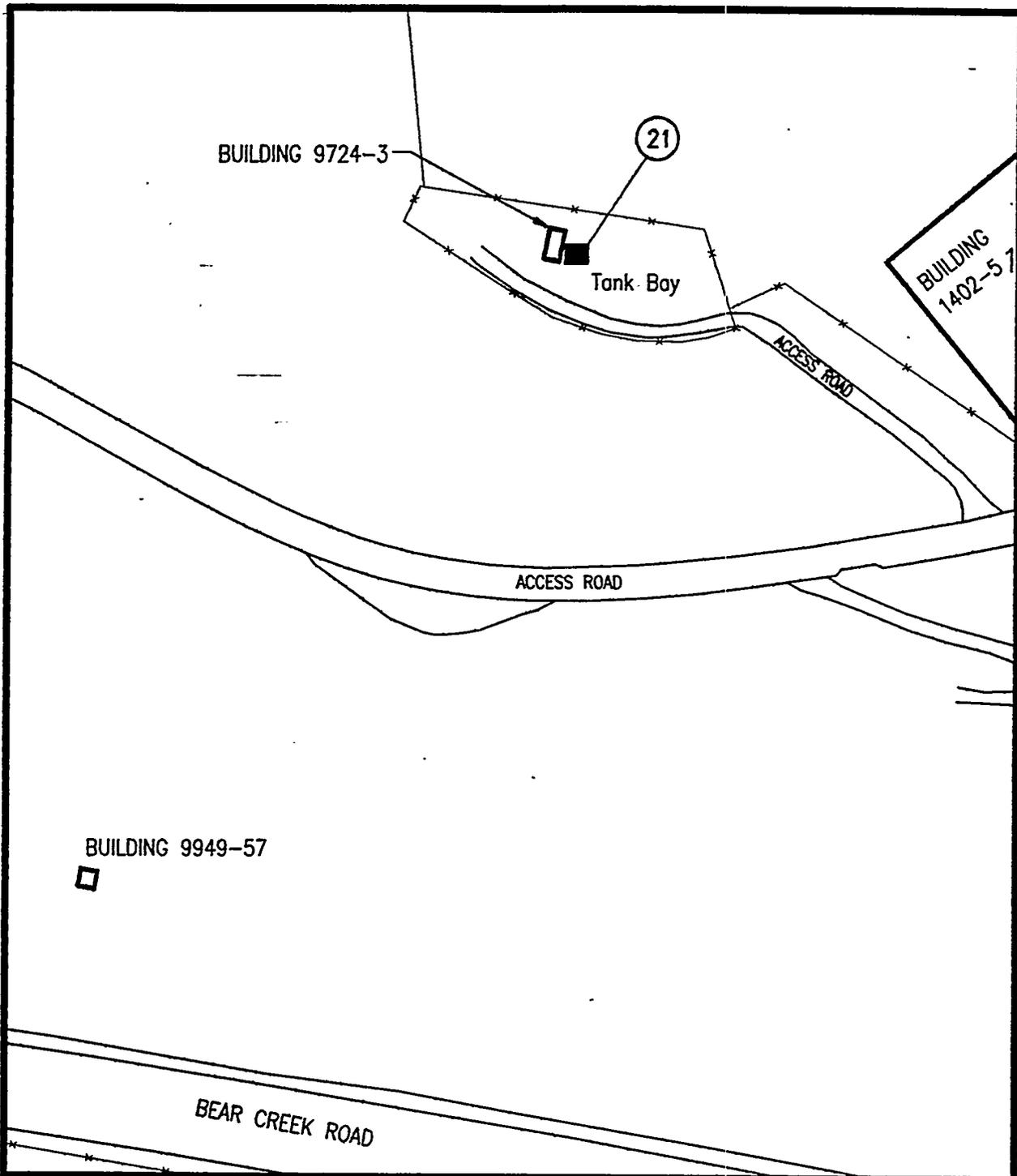
Y-12 PLANT NORTH



NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2082-U BLDG. 9754-1
CONTENTS: GASOLINE

9304281/DWGS/30633	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



LEGEND:

- (21) ... UST Directory Number
- ==== ... Road
- ... Building
- xx ... Fence

Y-12 PLANT NORTH



Science Applications International Corporation

MARTIN MARIETTA

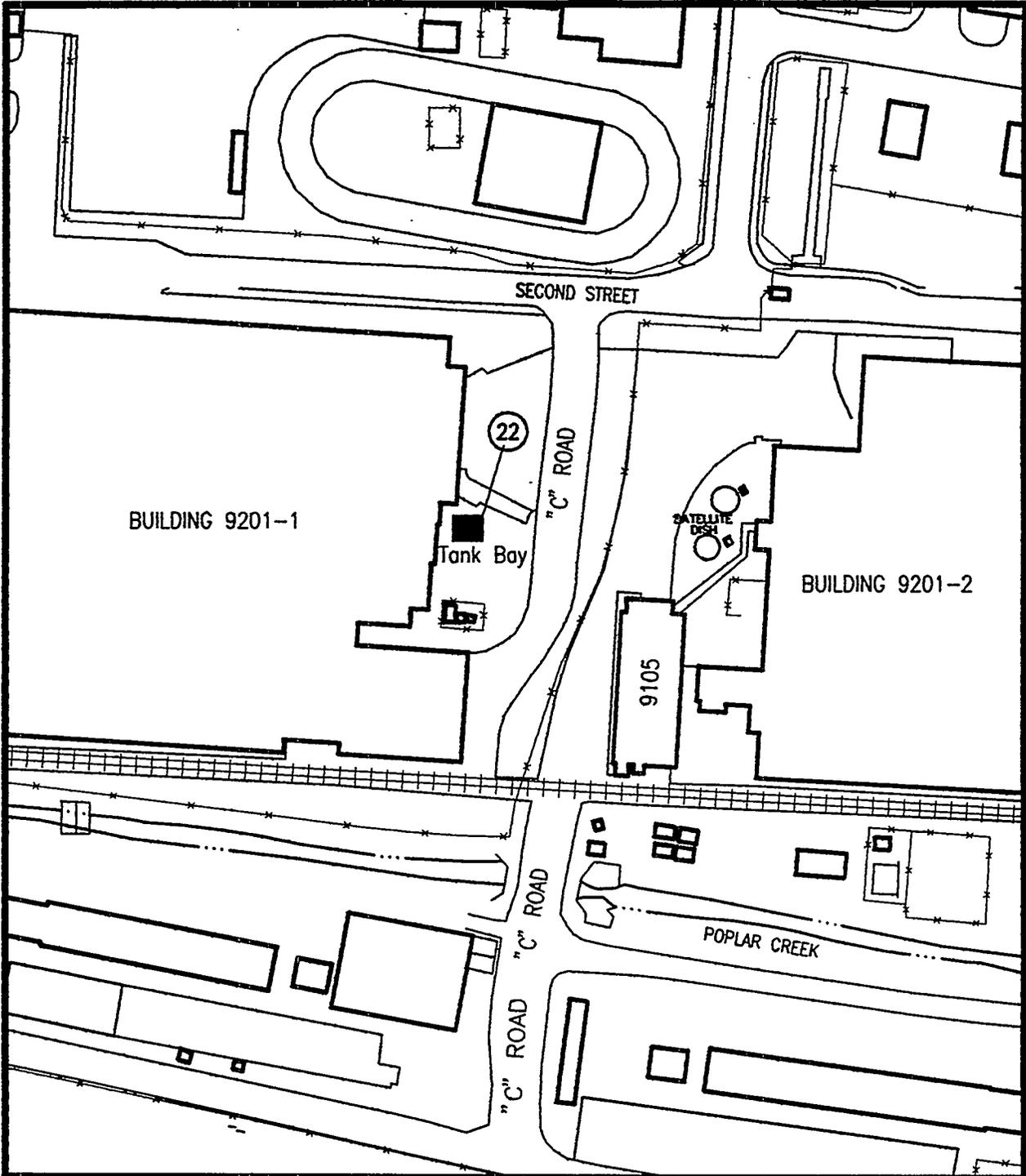
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2310-U PINE RIDGE WEST
CONTENTS: GASOLINE

93042R1/DWGS/30639
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

- (22) ... UST Directory Number
- ==== Road
- Building
- xx Fence

Y-12 PLANT NORTH

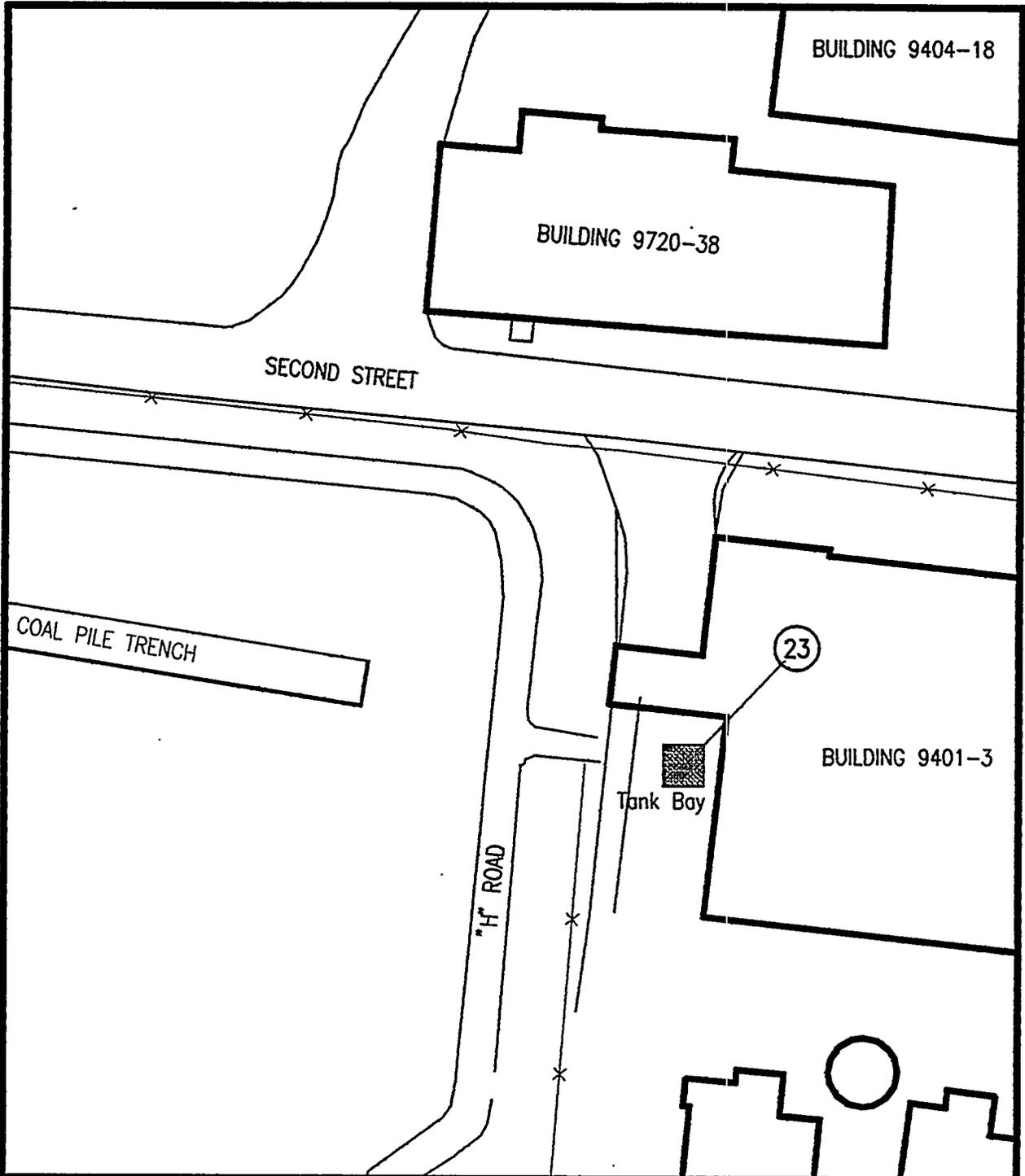
SAC
 Science Applications
 International Corporation

MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2331-U BLDG. 9201-1
 CONTENTS: GASOLINE

93042R1/DWGS/30641	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



LEGEND:

- 23 ... UST Directory Number
- ==== ... Road
- ▭ ... Building
- x-x- ... Fence

Y-12 PLANT NORTH

SAC
 Science Applications
 International Corporation

MARTIN MARIETTA

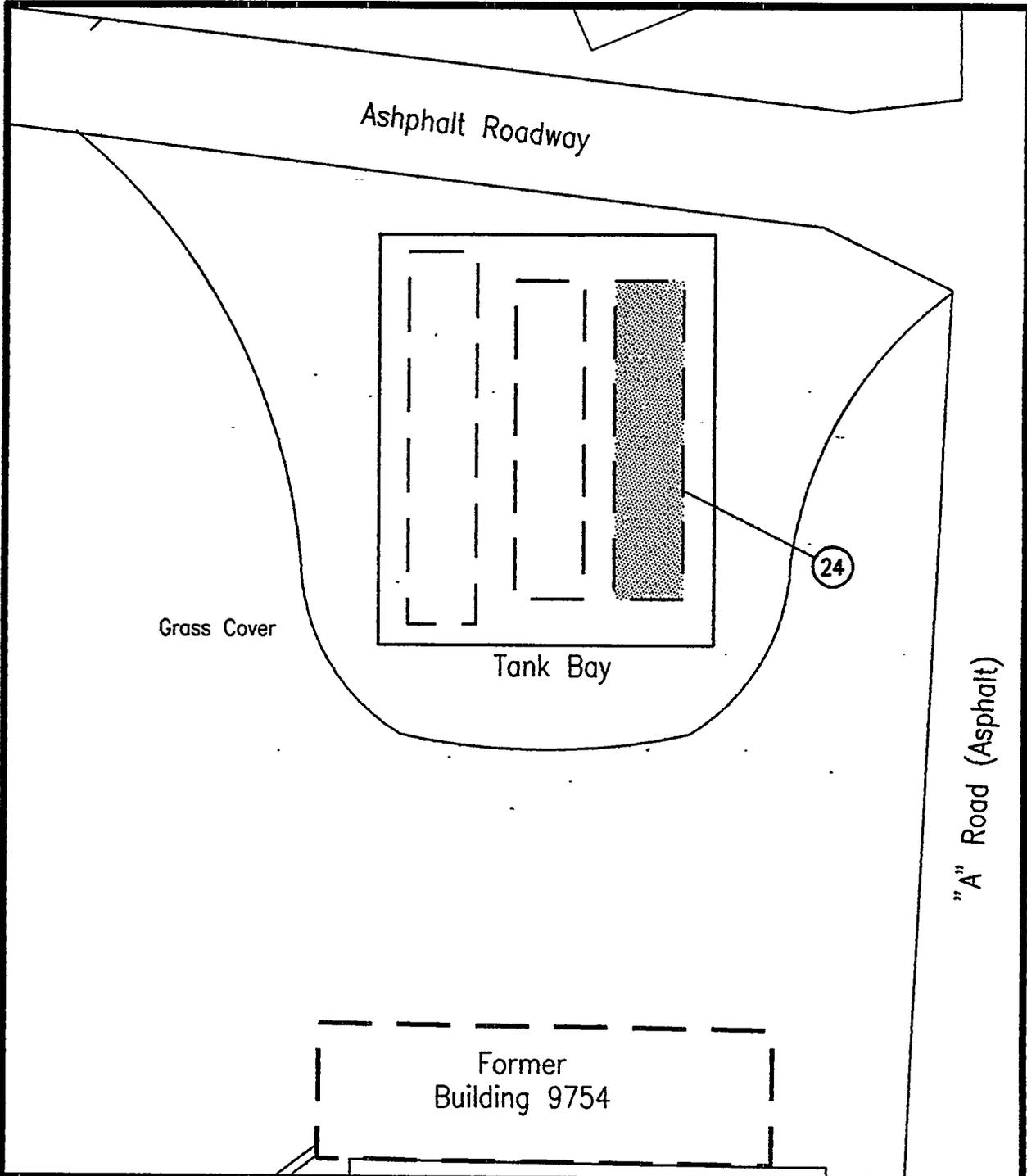
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 0713-U BLDG. 9401-3
 CONTENTS: FUEL OIL

93042R1/DWGS/30625
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

- 24 ... UST Directory Number
- ==== ... Road
- ... Building
- ×× ... Fence

Y-12 PLANT NORTH

SAC
 Science Applications
 International Corporation

MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 0836-U BLDG. 9754
 CONTENTS: USED OIL

93042R1/DWGS/30626	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE

3-35

BUILDING 9744

SECOND STREET

25

Tank Bay

BUILDING 9204-3

Asphalt

Conc.

"E" ROAD

Asphalt

Asphalt

LEGEND:

- (25)** ... UST Directory Number
- ==== Road
- Building
- ×× Fence

Y-12 PLANT NORTH



Science Applications
International Corporation

MARTIN MARIETTA

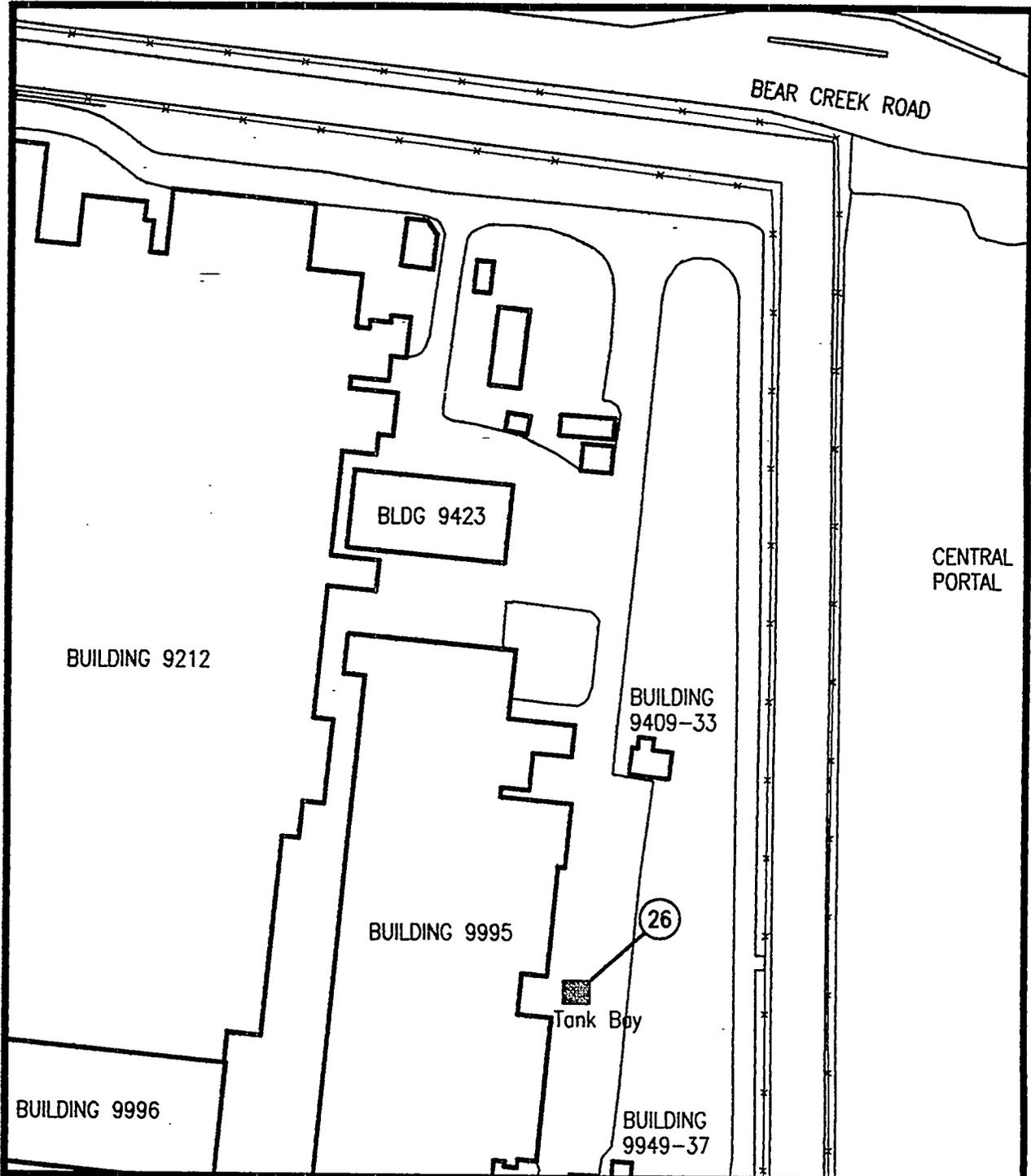
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 0928-U BLDG, 9204-3
CONTENTS: GASOLINE

93042R1/DWGS/30627
CAD FILE NAME

REV. 1 - 7/20/94
REV. - DATE



LEGEND:

- 26 ... UST Directory Number
- ==== ... Road
- ▭ ... Building
- *-* ... Fence

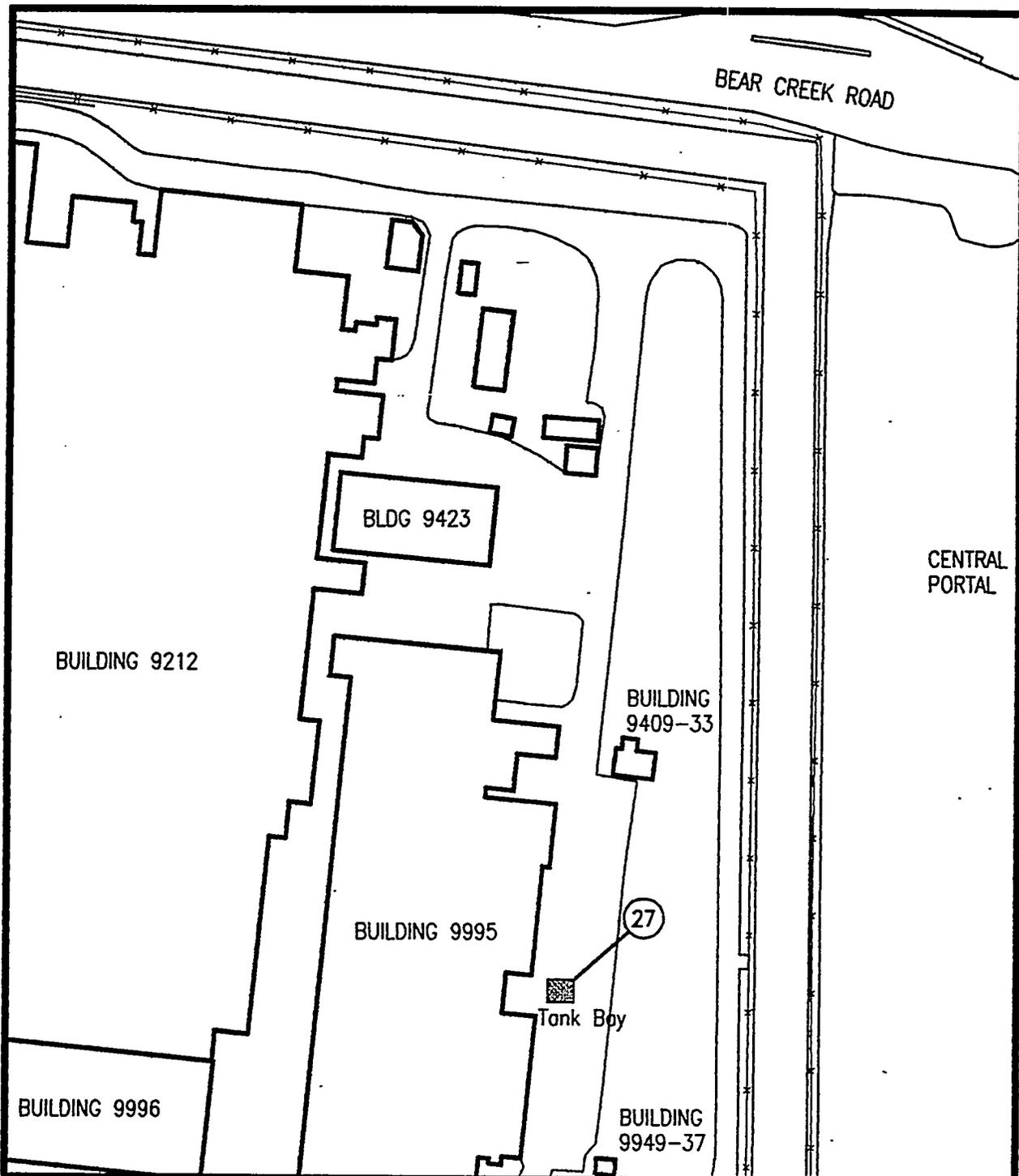
Y-12 PLANT NORTH



NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2078-U BLDG. 9995
CONTENTS: GASOLINE

93042R1/DWGS/3061B	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



LEGEND:

- 27 ... UST Directory Number
- ==== ... Road
- ... Building
- *-* ... Fence

Y-12 PLANT NORTH

SAC
 Science Applications
 International Corporation

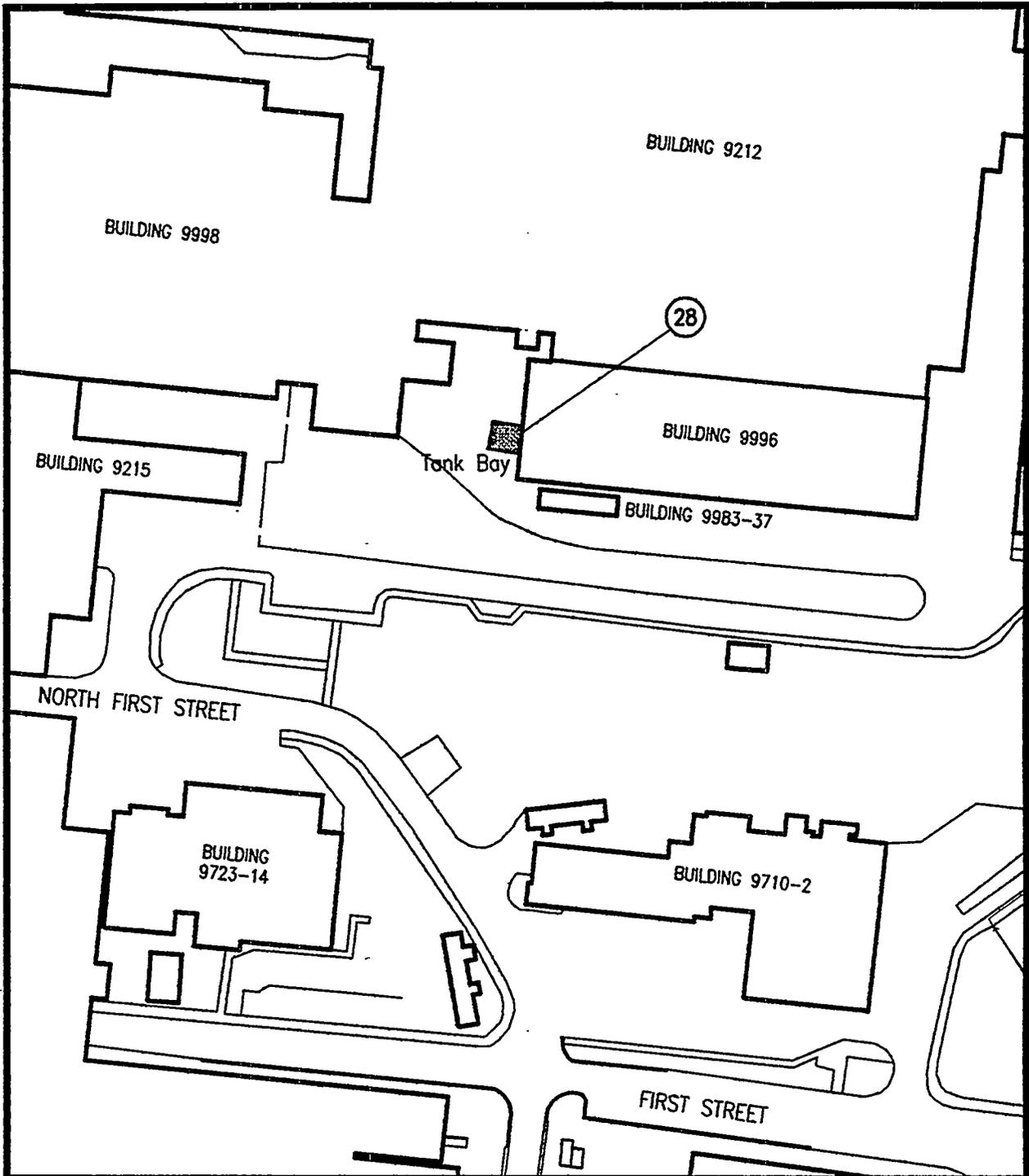
MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2079-U BLDG. 9995
CONTENTS: GASOLINE

93042R1/DWGS/30619	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



LEGEND:

(28) ... UST Directory Number

..... Road

□ Building

×× Fence

Y-12 PLANT NORTH

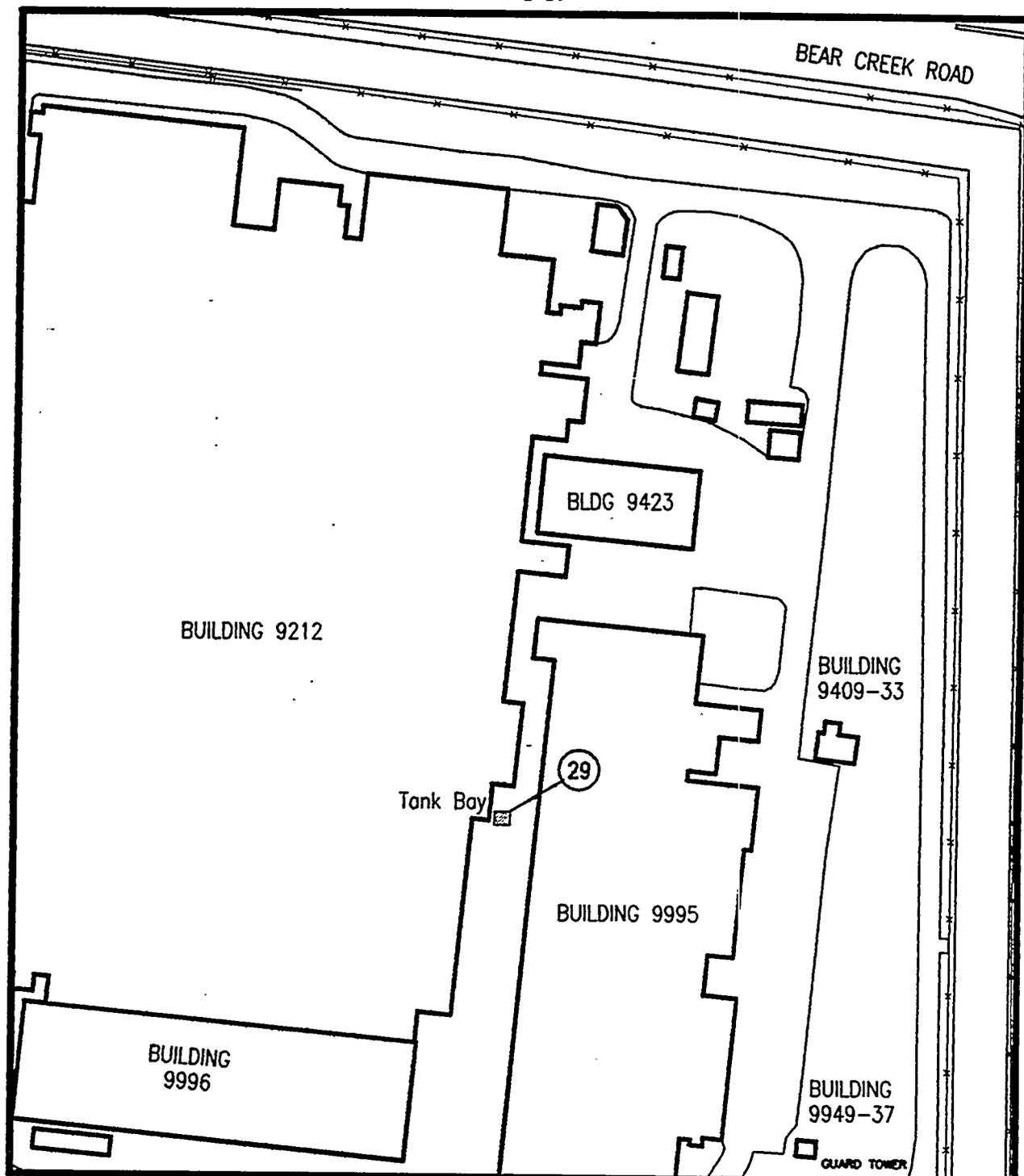
SAC.
 Science Applications
 International Corporation

MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2080-U BLDG. 9996.
 CONTENTS: GASOLINE

93042R1/DWGS/30631	REV. 1 - 7/20/94
CAD FILE NAME	REV. - DATE



LEGEND:

- 29 ... UST Directory Number
- ==== ... Road
- ▭ ... Building
- ×× ... Fence

Y-12 PLANT NORTH



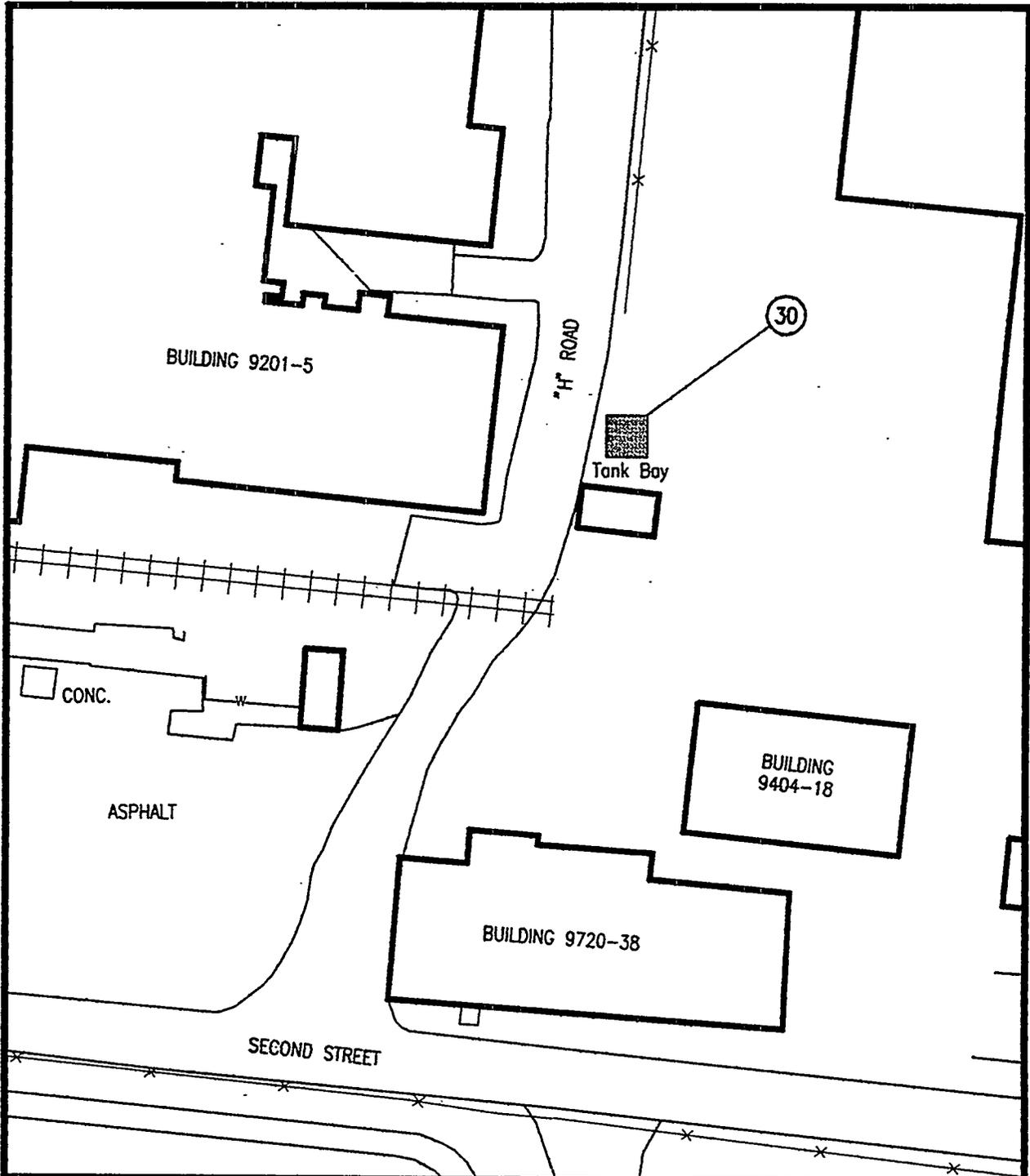
MARTIN MARIETTA
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2081-U BLDG. 9212
CONTENTS: GASOLINE

9304281/DWGS/30632
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

-  ... UST Directory Number
-  Road
-  Building
-  Fence

Y-12 PLANT NORTH

SAC
 Science Applications
 International Corporation

MARTIN MARIETTA

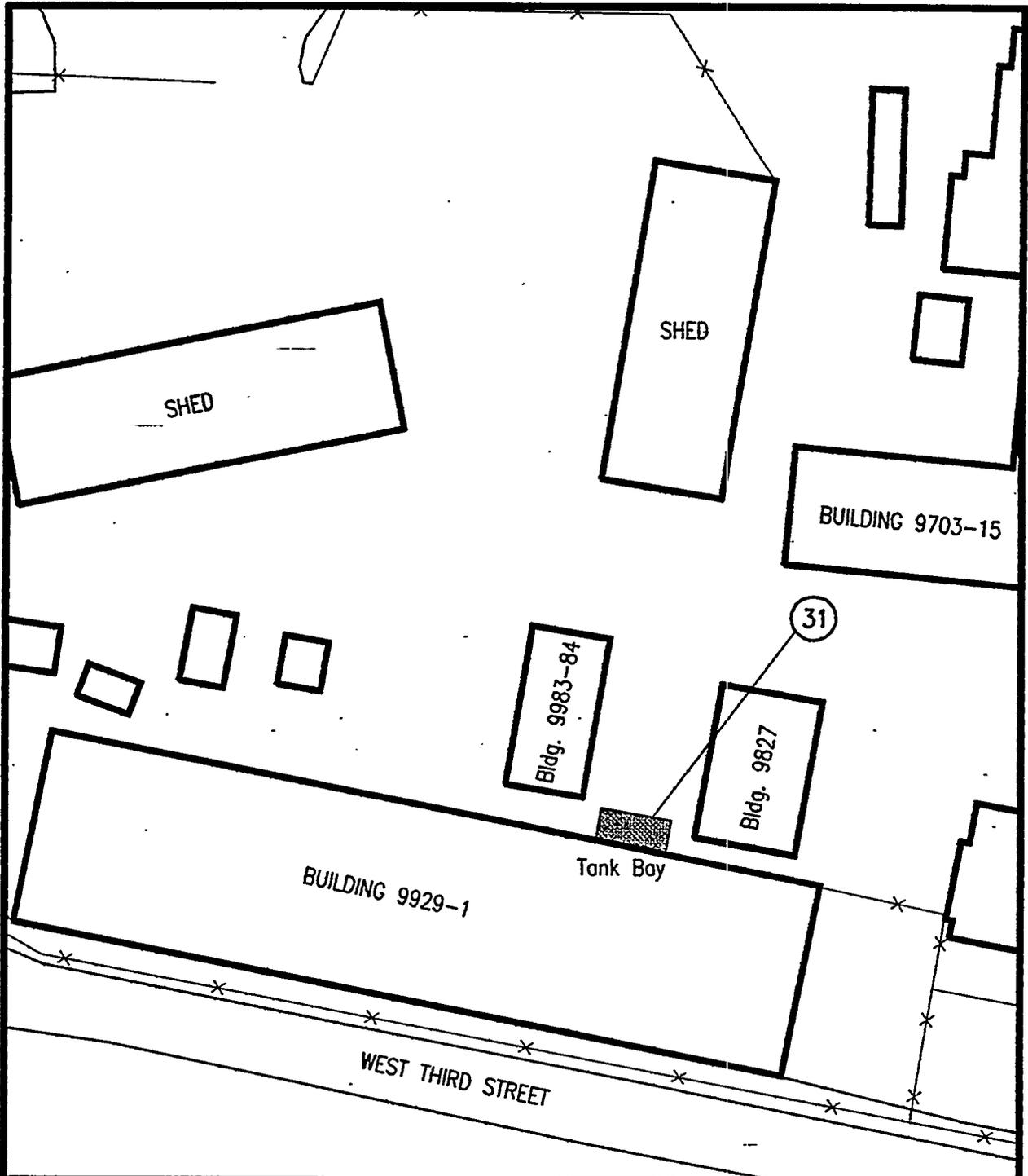
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2099-U BLDG. 9201-5
 CONTENTS: GASOLINE

93042R1/DWGS/30634
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

- 31 ... UST Directory Number
-Road
- Building
- Fence

Y-12 PLANT NORTH

SAC
 Science Applications
 International Corporation

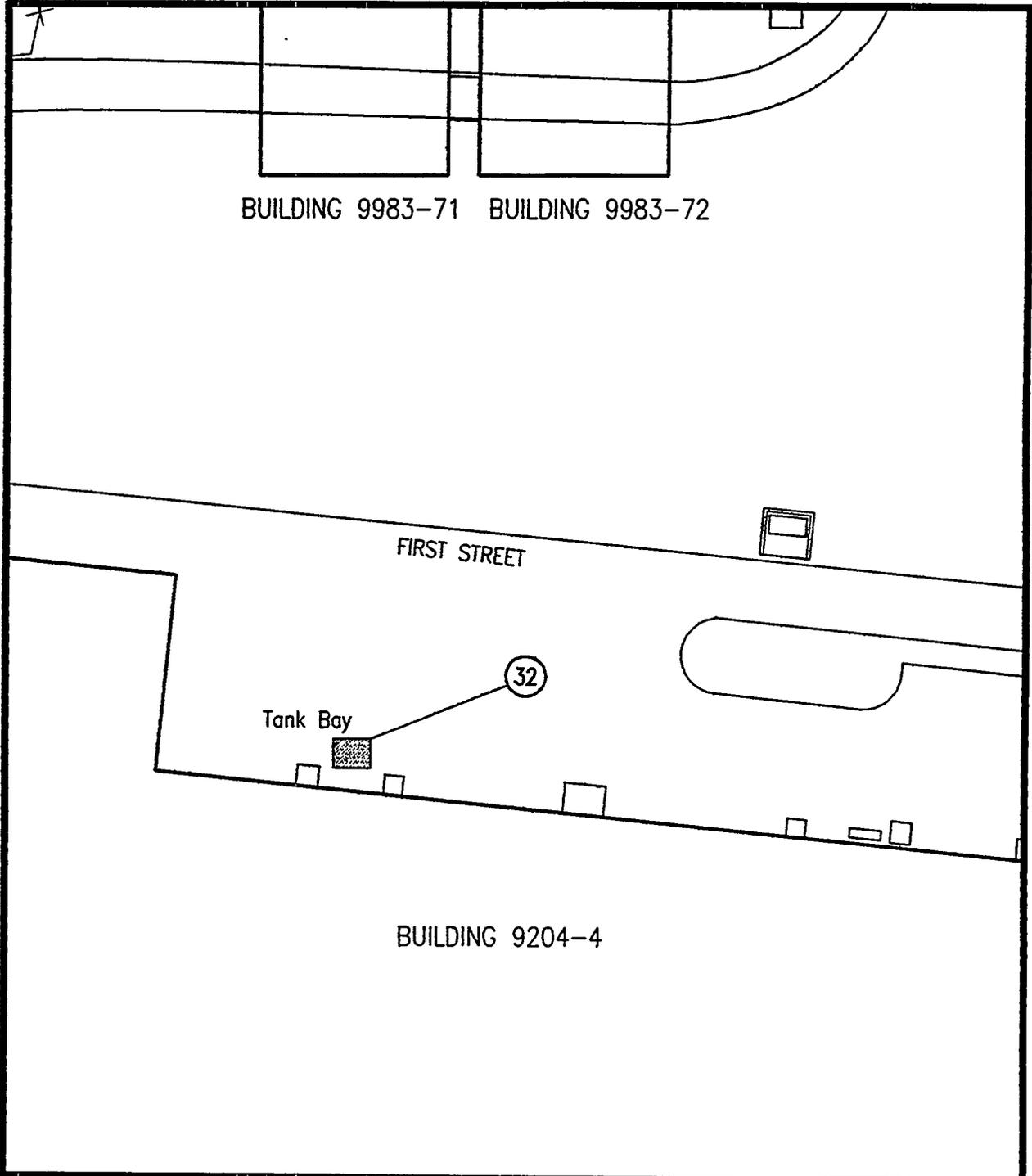
MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2117-U BLDG. 9929-1
CONTENTS: FUEL OIL

93042R1/DWGS/30635	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



LEGEND:

-  ... UST Directory Number
-  Road
-  Building
-  Fence

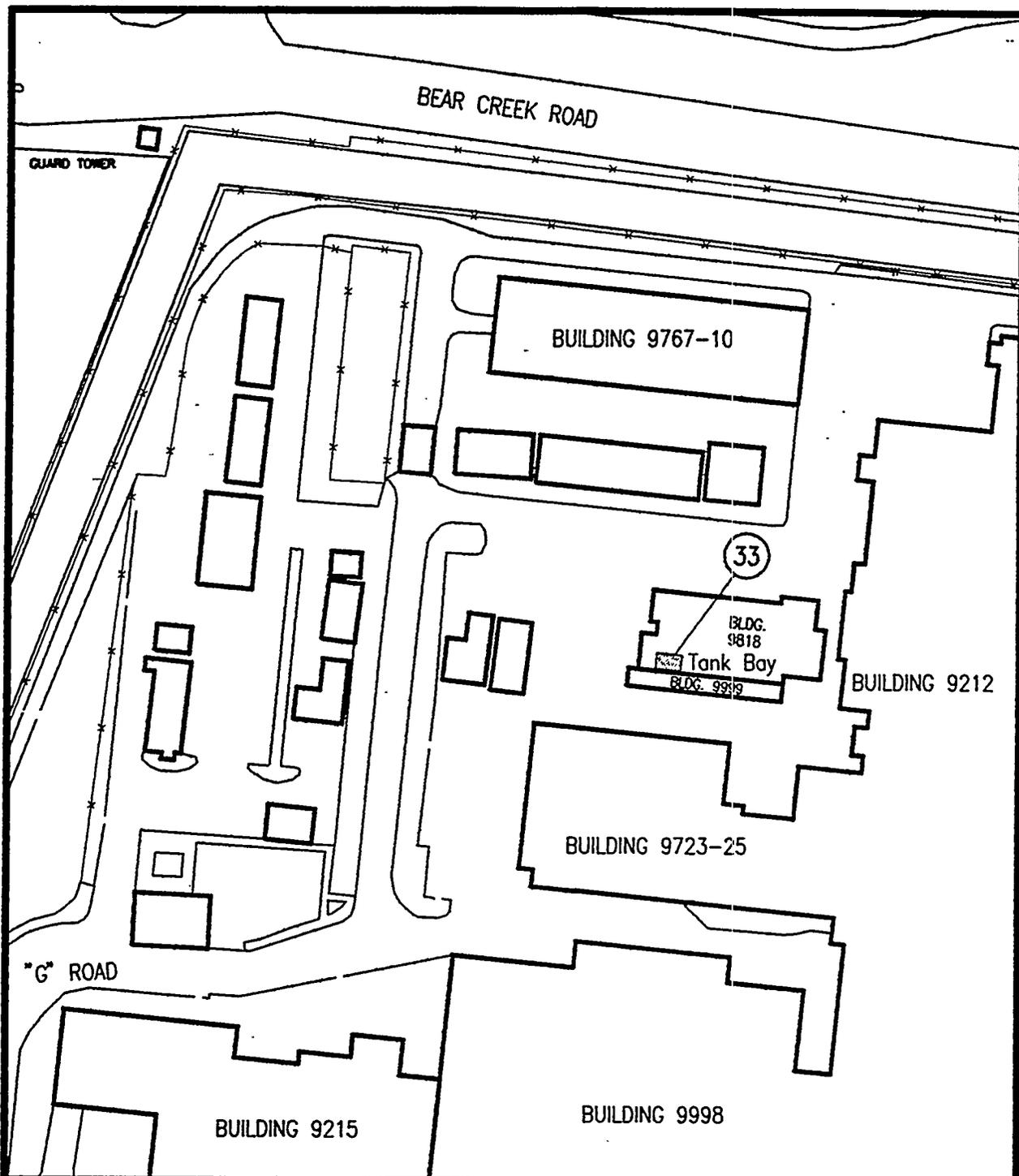
Y-12 PLANT NORTH



NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2130-U BLDG. 9204-4
CONTENTS: GASOLINE

93042R1/DWGS/3068	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



LEGEND:

- 33 ... UST Directory Number
- Road
- Building
- xx Fence

Y-12 PLANT NORTH

SAC.
 Science Applications
 International Corporation

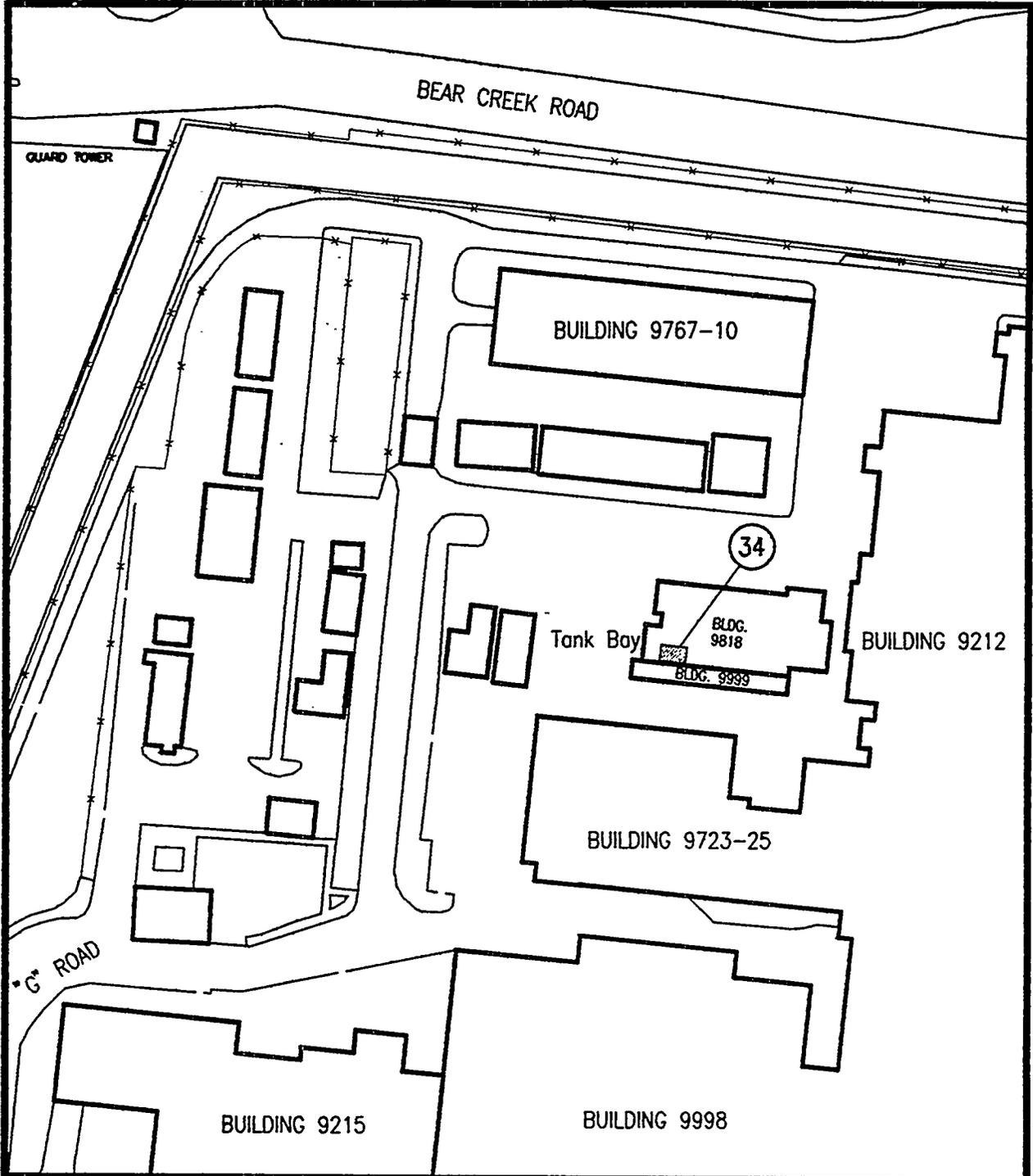
MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2293-U BLDG. 9999
 CONTENTS: GASOLINE

93042R1/DWGS/30636
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

- 34 ... UST Directory Number
- Road
- Building
- ×× Fence

Y-12 PLANT NORTH



NOT TO SCALE

93042R1/DWGS/30637	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE

OAK RIDGE Y-12 PLANT
UST 2294-U BLDG. 9999
CONTENTS: GASOLINE

3-45

BUILDING 9723-25

BUILDING 9998

35

Tank Bay

BUILDING 9215

NORTH FIRST STREET

LEGEND:

-  ... UST Directory Number
- Road
-  Building
-  Fence

Y-12 PLANT NORTH



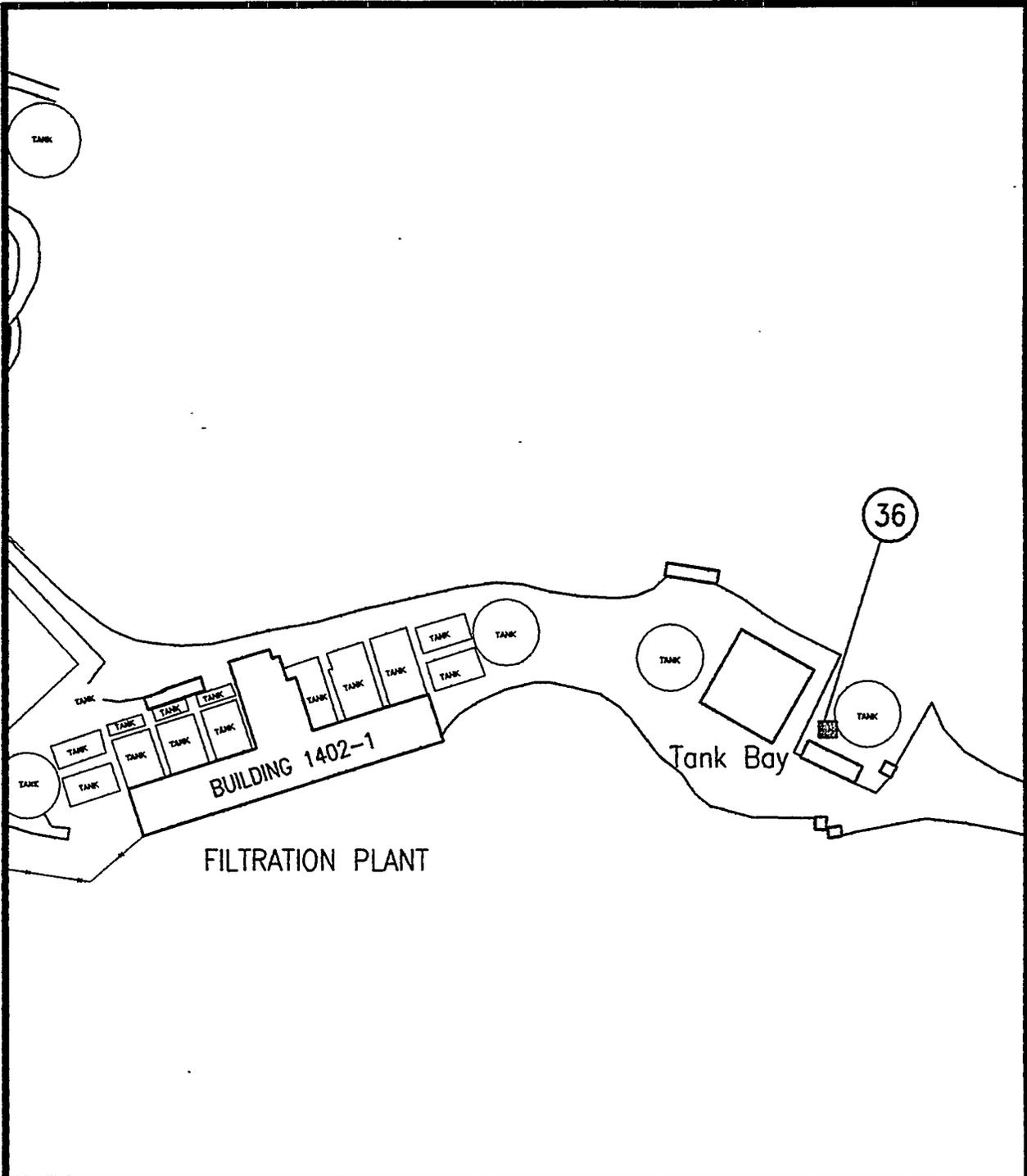
MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2305-U BLDG. 9998
CONTENTS: DIESEL

93042R1/DWGS/30638	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



LEGEND:

- 36 ... UST Directory Number
- ==== Road
- Building
- xx Fence

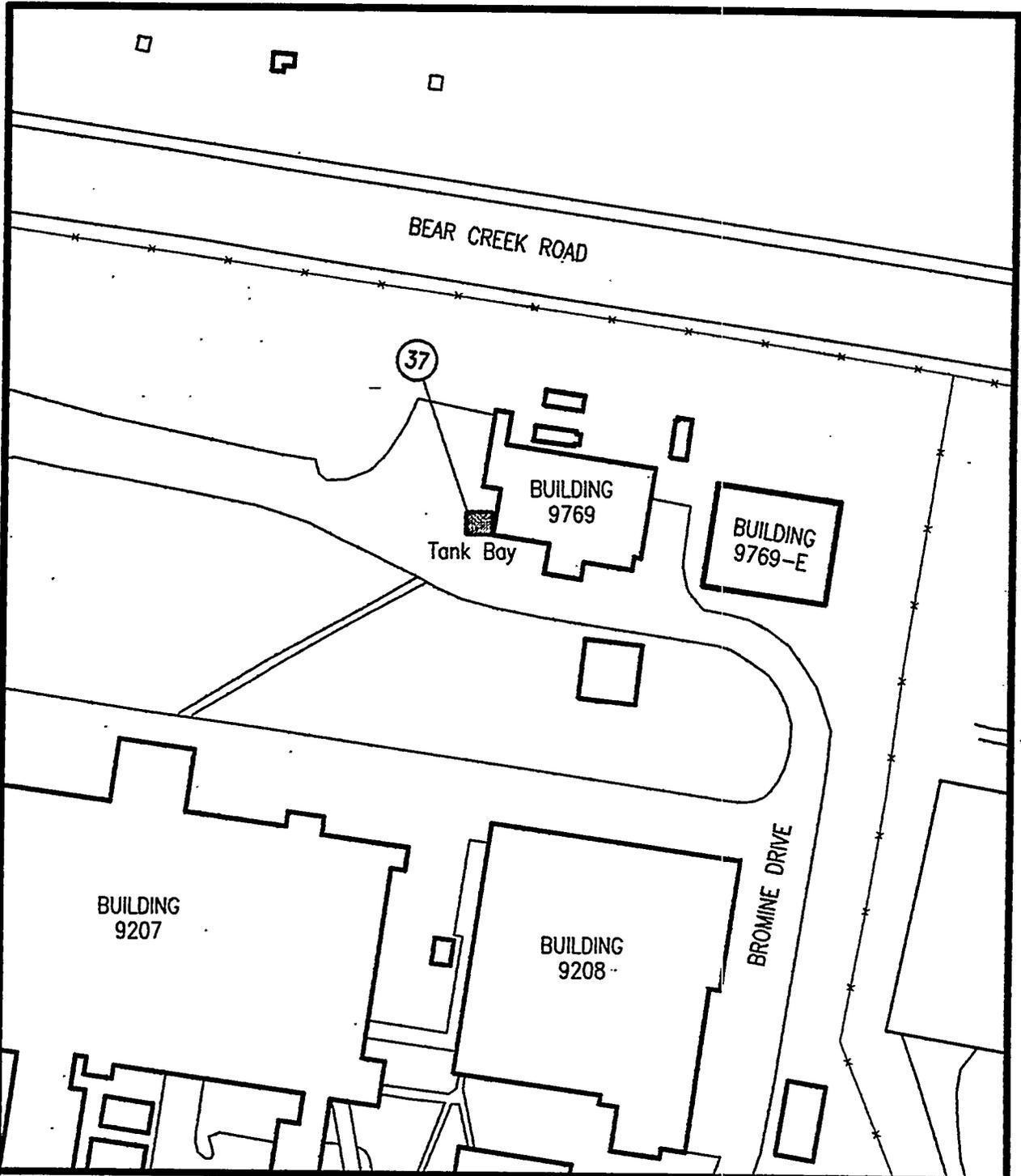
Y-12 PLANT NORTH



NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2315-U PINE RIDGE EAST
CONTENTS: GASOLINE

93042R1/DWGS/30640 CAD FILE NAME	REV. 1 - 7/22/94 REV. - DATE
-------------------------------------	---------------------------------



LEGEND:

- 37 ... UST Directory Number
- ==== ... Road
- ... Building
- xx ... Fence

Y-12 PLANT NORTH

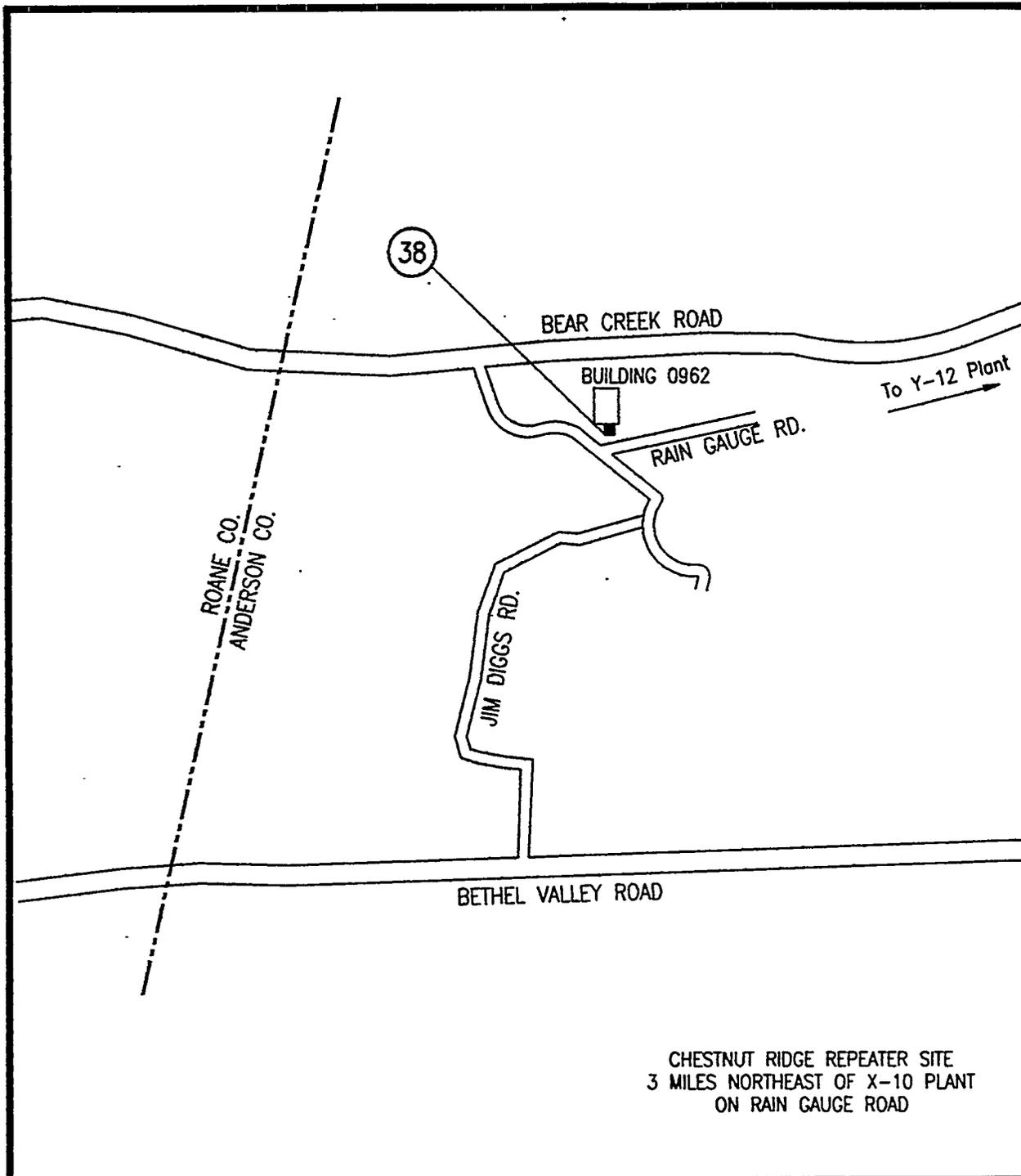
SAC
 Science Applications
 International Corporation

MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2330-U BLDG. 9769
 CONTENTS: FUEL OIL

93042R1/DMGS/30620	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



CHESTNUT RIDGE REPEATER SITE
 3 MILES NORTHEAST OF X-10 PLANT
 ON RAIN GAUGE ROAD

LEGEND:

- 38 ... UST Directory Number
- ==== Road
- Building
- **-** Fence

Y-12 PLANT NORTH



MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

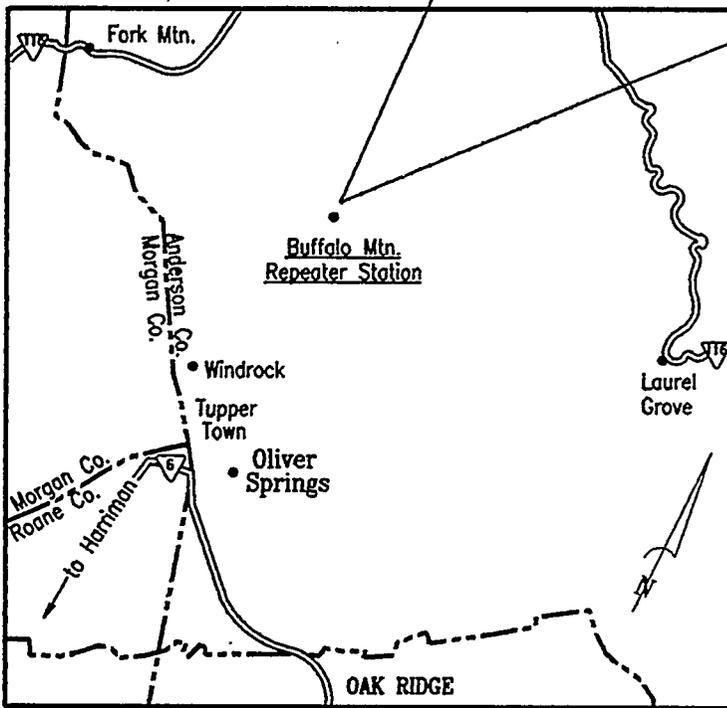
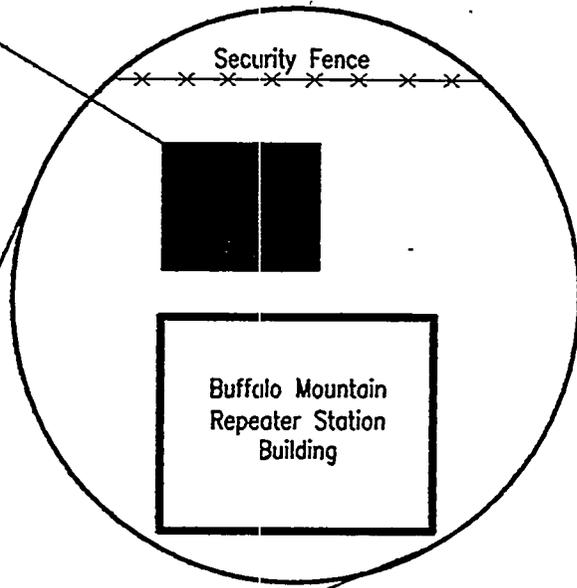
NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2336-U CHESTNUT RDG.
 CONTENTS: GASOLINE

93042R1/DWGS/30642	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE

39

SITE MAP



VICINITY MAP

BUFFALO MOUNTAIN SITE,
OFF DOE OAK RIDGE RESERVATION,
APPROXIMATELY 16 MILES NORTHWEST
OF THE Y-12 PLANT, 4 MILES NORTH OF
OLIVER SPRINGS IN ANDERSON COUNTY

LEGEND:

- (39) ... UST Directory Number
- ==== Road
- Building
- ×× Fence

Y-12 PLANT NORTH

SAC
Science Applications
International Corporation

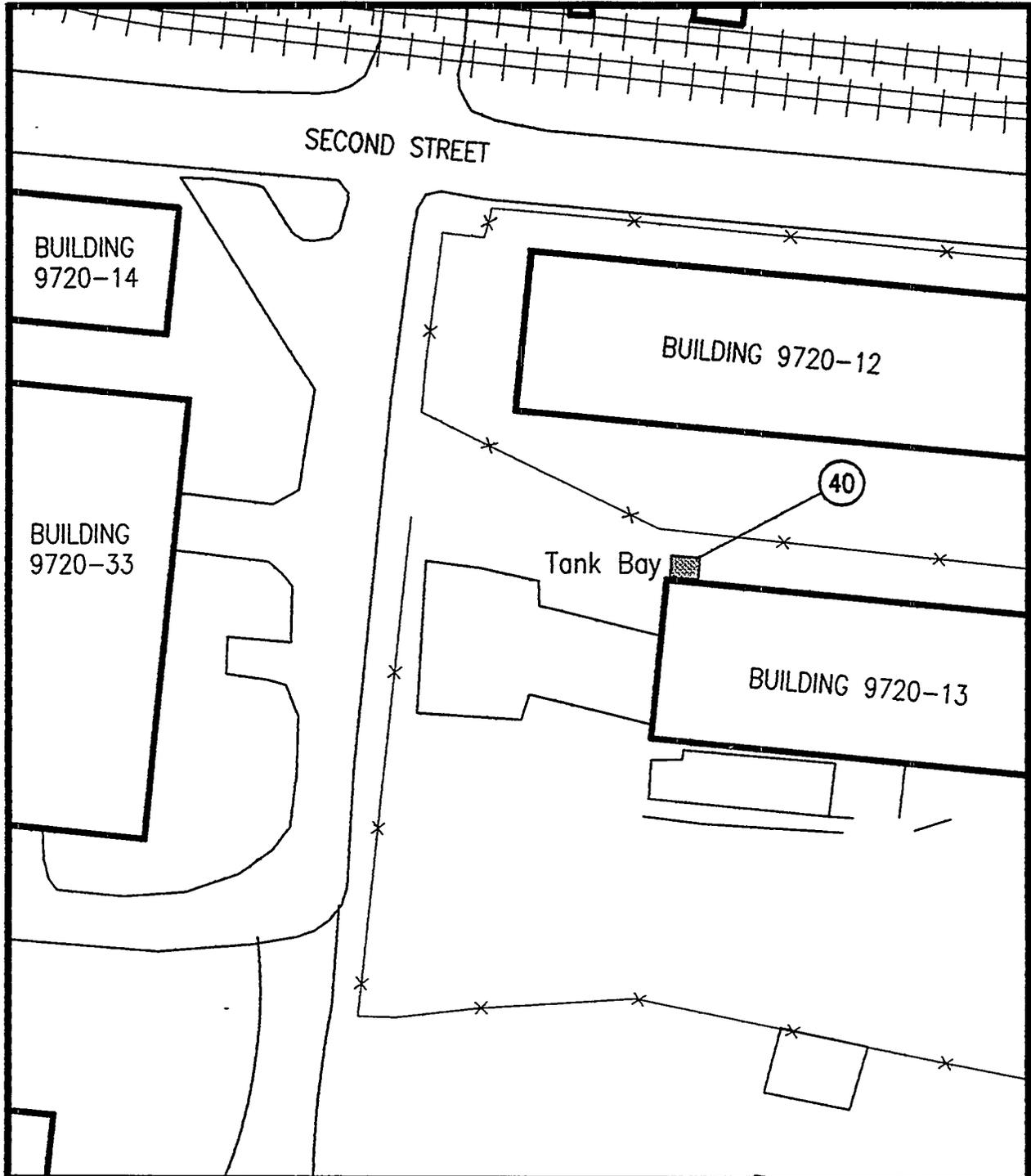
MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2337-U BUFFALO MT.
CONTENTS: GASOLINE

93042R1/DWGS/30643	REV. 1 - 5/27/94
CAD FILE NAME	REV. - DATE



LEGEND:

- 40 ... UST Directory Number
- Road
- Building
- ×× Fence

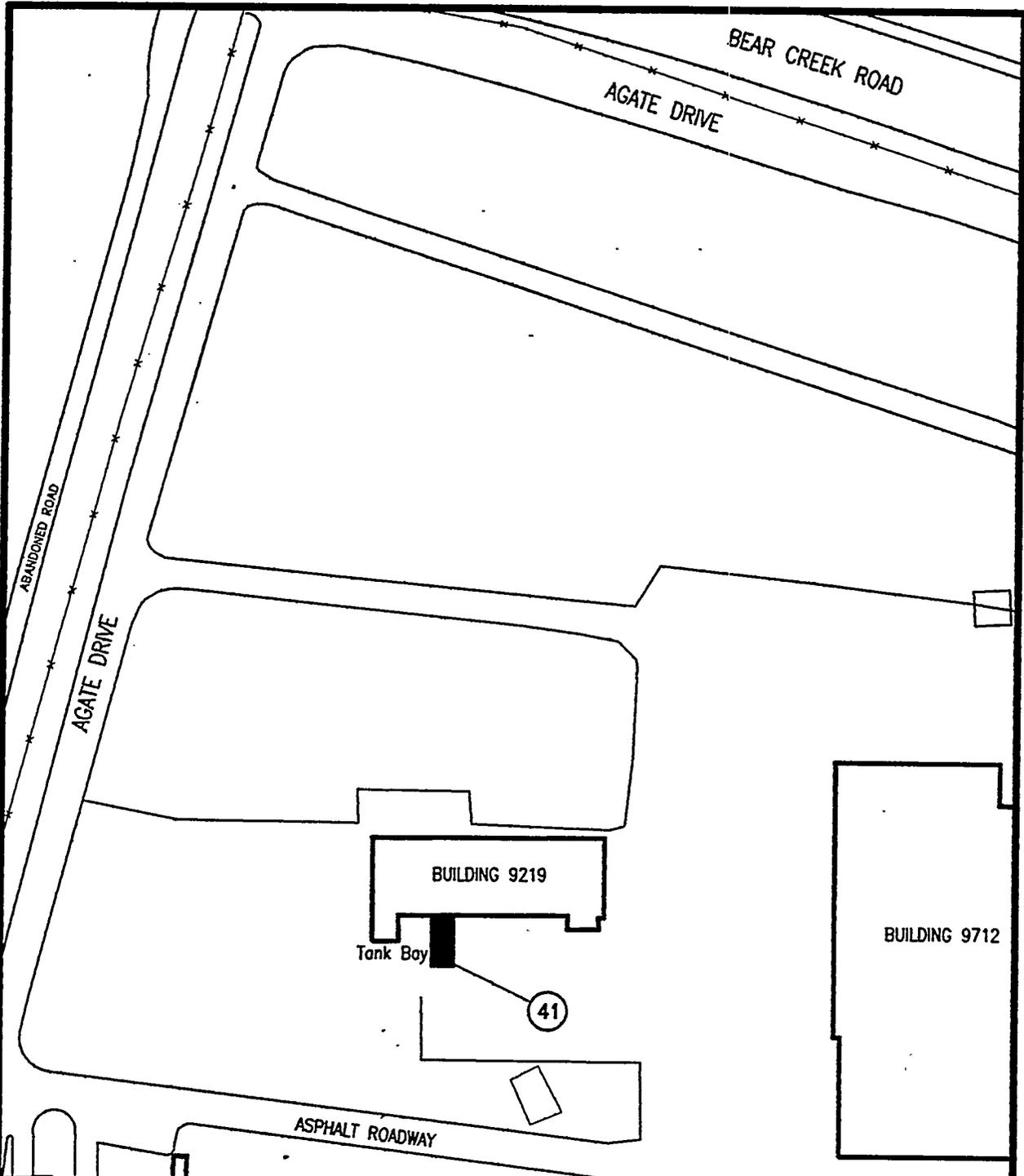
Y-12 PLANT NORTH



NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2338-U BLDG. 9720-13
CONTENTS: USED OIL

93042R1/DWCS/30644	REV. 1 - 7/22/94
CAO FILE NAME	REV. - DATE



LEGEND:

- 41 ... UST Directory Number
- ==== ... Road
- ▭ ... Building
- xx ... Fence

Y-12 PLANT NORTH



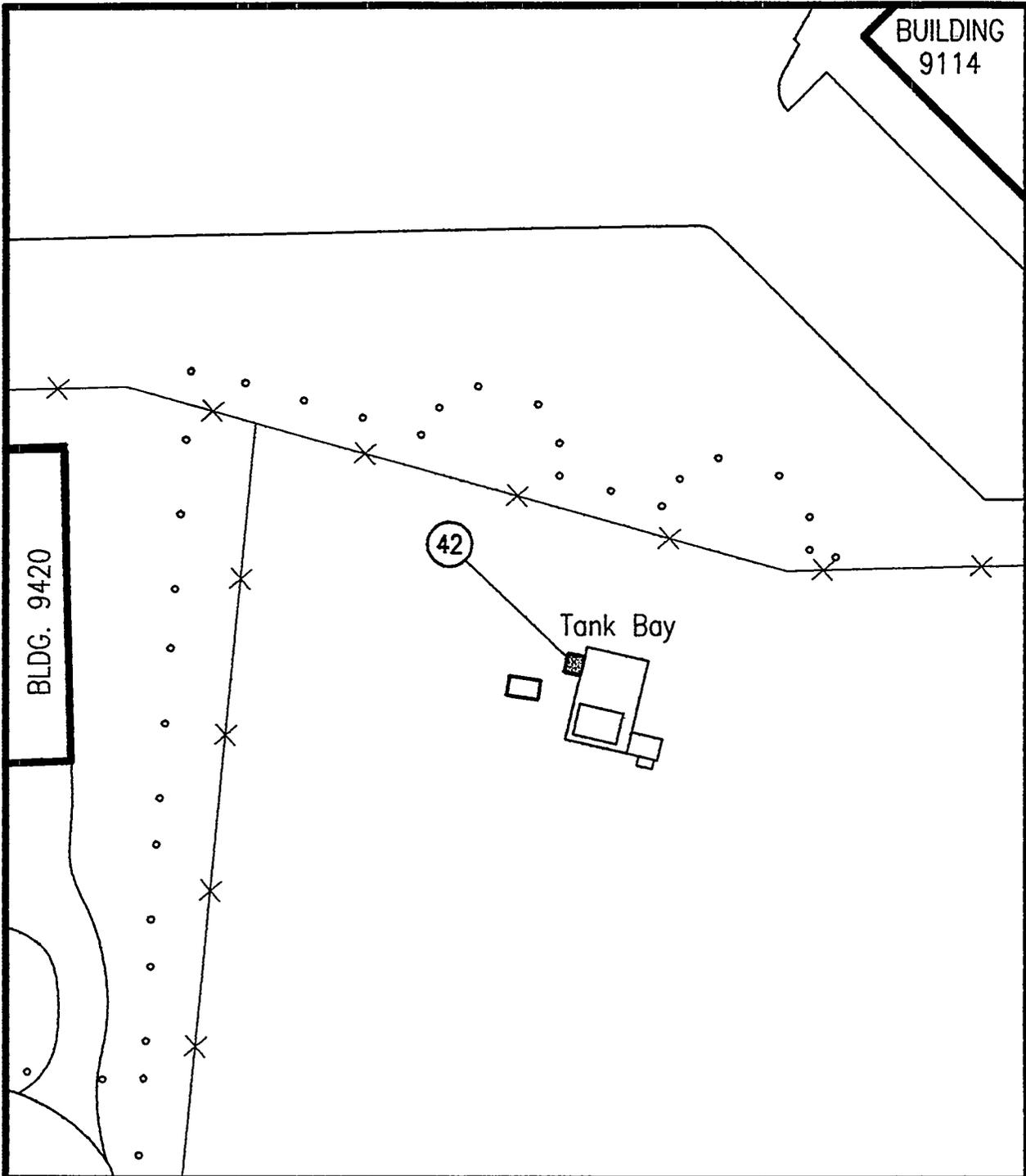
MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2395 BLDG. 9219-13
CONTENTS: FUEL OIL

93042R1/DWGS/30645	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



LEGEND:

-  ... UST Directory Number
-  Road
-  Building
-  Fence

Y-12 PLANT NORTH

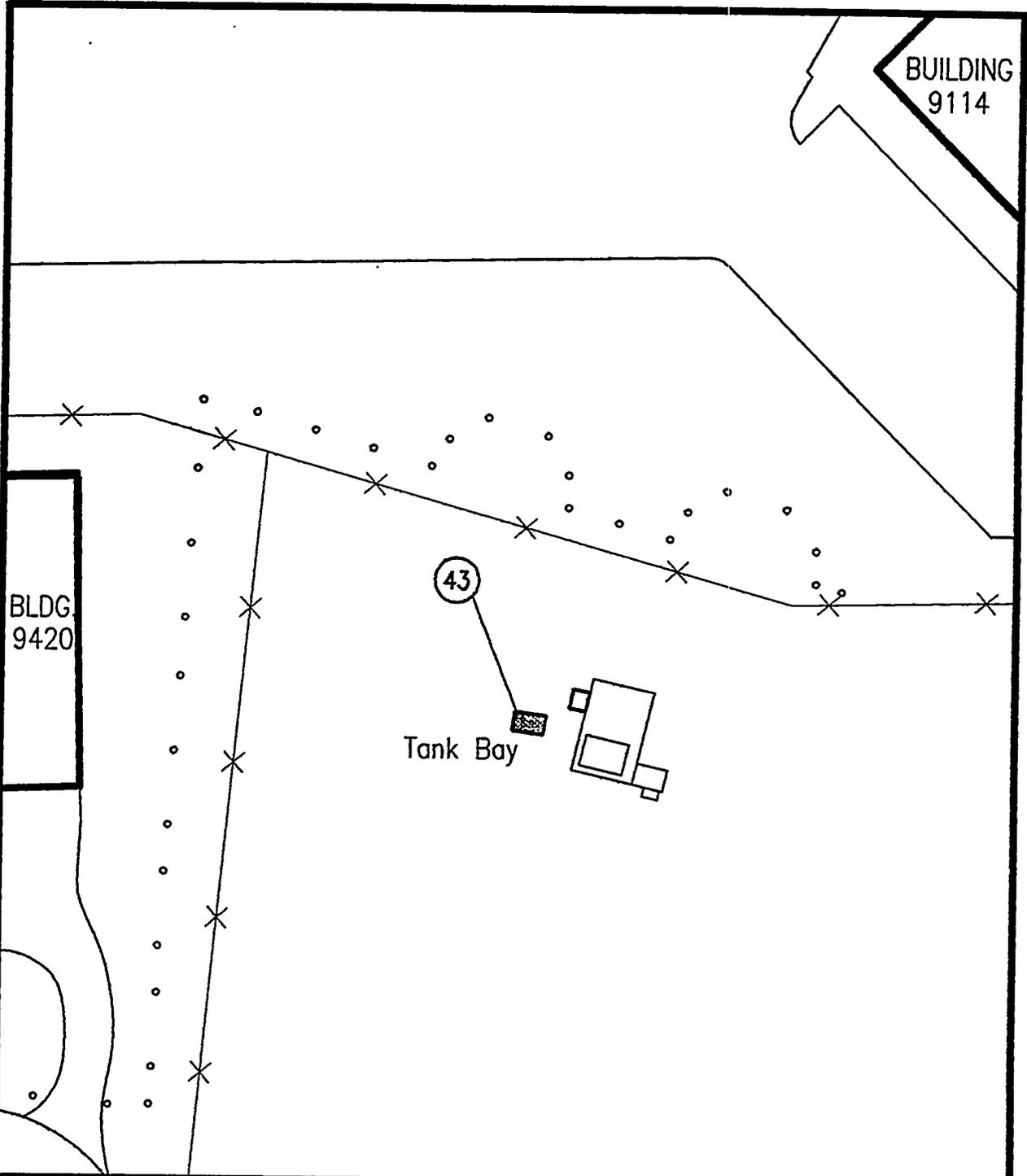


MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2063-U, SYDD
 CONTENTS: OIL/SOLVENTS

93042R1/DWGS/30615	REV. 1 - 7/20/94
CAD FILE NAME	REV. - DATE



LEGEND:

-  ... UST Directory Number
-  Road
-  Building
-  Fence

Y-12 PLANT NORTH

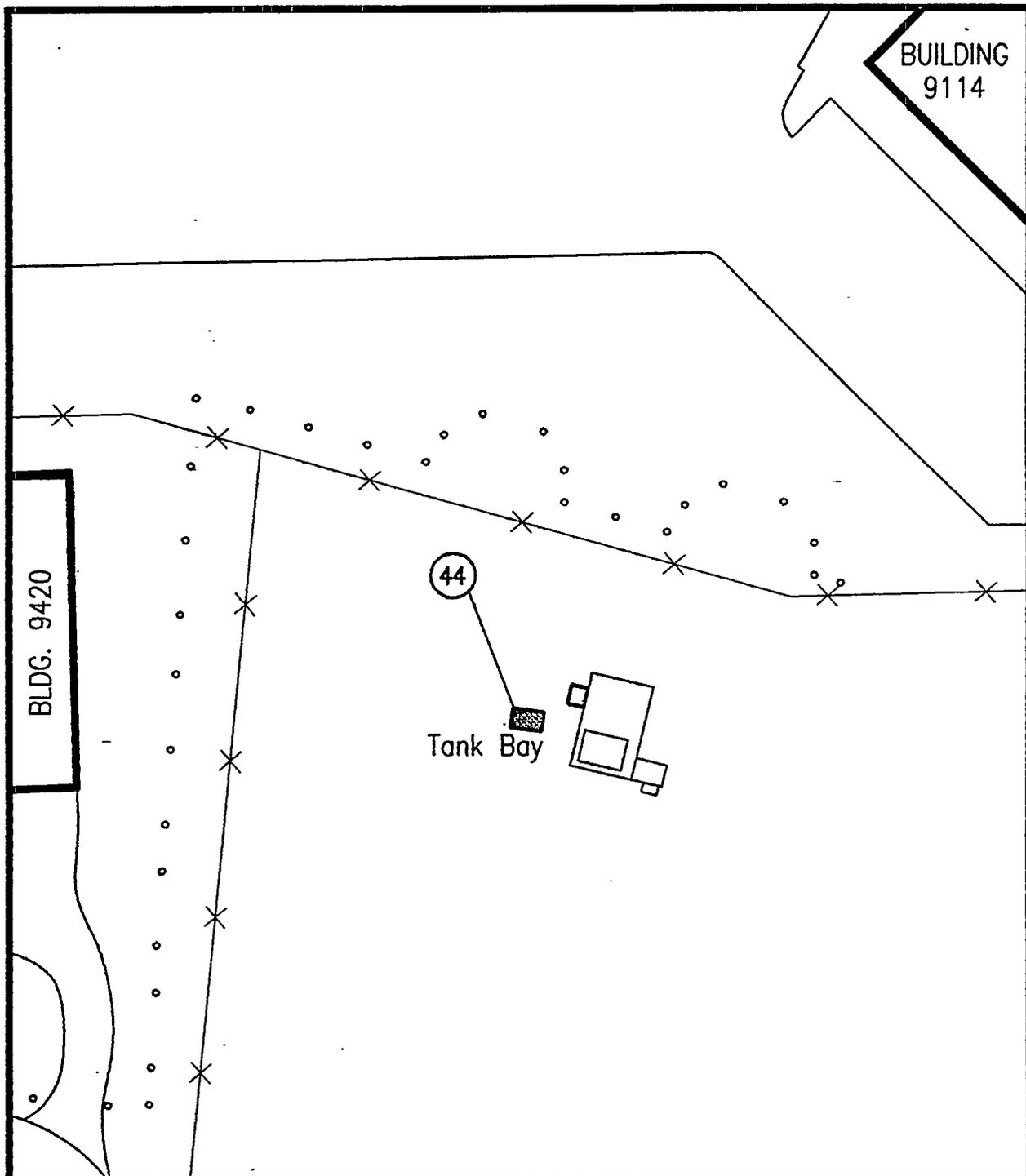
SAC
 Science Applications
 International Corporation

MARTIN MARIETTA
 MARTIN MARIETTA ENERGY SYSTEMS, INC.
 ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
 UST 2328-U, SYDD
 CONTENTS: OIL/SOLVENTS

93042R1/DWGS/30616	REV. 1 - 7/20/94
CAD FILE NAME	REV. - DATE



LEGEND:

- 44** ... UST Directory Number
- ==== ... Road
- ... Building
- ** ... Fence

Y-12 PLANT NORTH

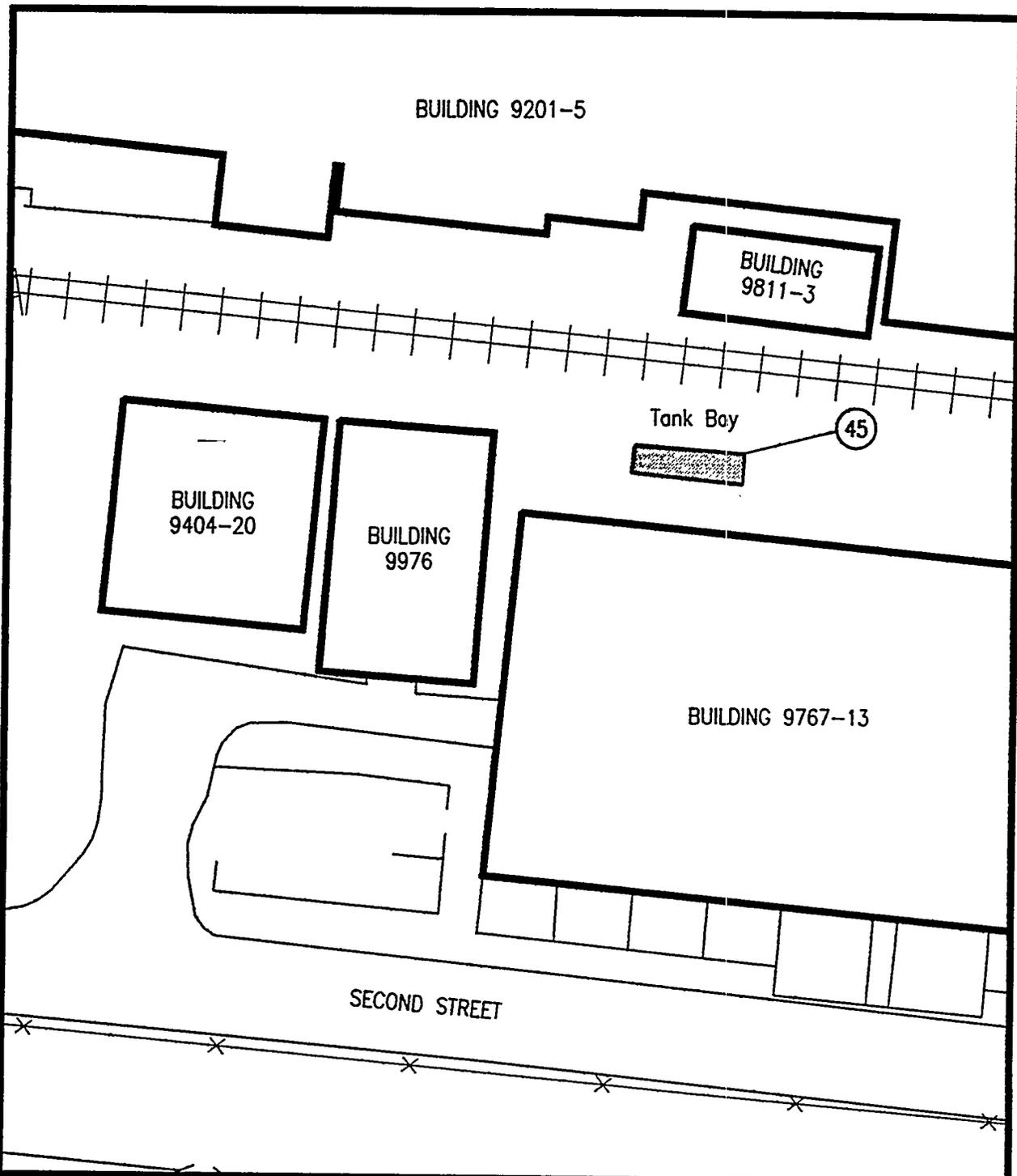


MARTIN MARIETTA
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2329-U, SYDD
CONTENTS: OIL/SOLVENTS

93042R1/DWGS/30617	REV. 1 - 7/20/94
CAD FILE NAME	REV. - DATE



LEGEND:

-  ...UST Directory Number
- Road
-  Building
-  Fence

Y-12 PLANT NORTH

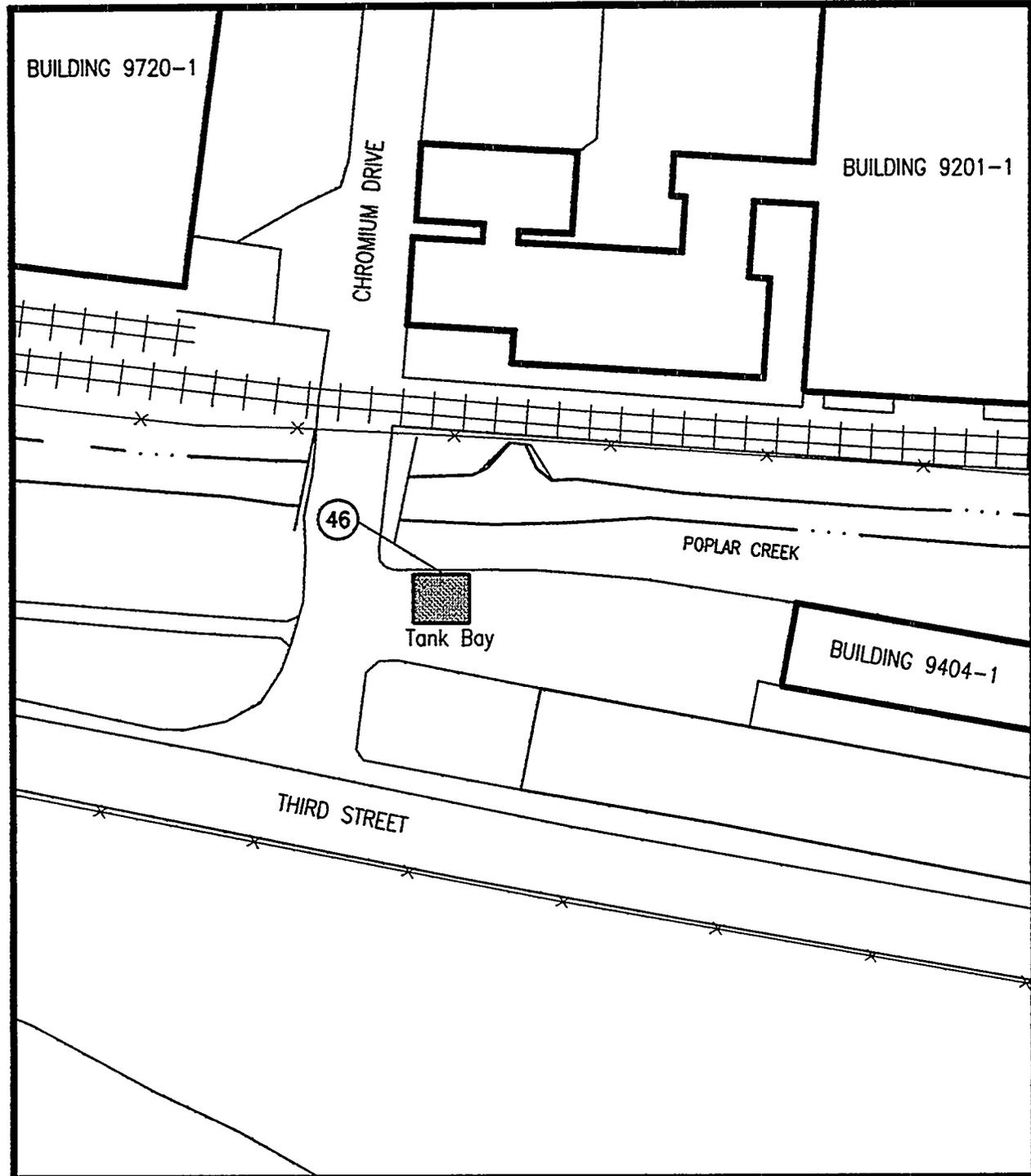


MARTIN MARIETTA
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
2102-U BLDG. 9767-13
CONTENTS: METHANOL

93042R1/DWGS/30611	REV. 1 - 7/22/94
CAD FILE NAME	REV. - DATE



LEGEND:

- 46 ... UST Directory Number
- Road
- Building
- xx Fence

Y-12 PLANT NORTH



MARTIN MARIETTA

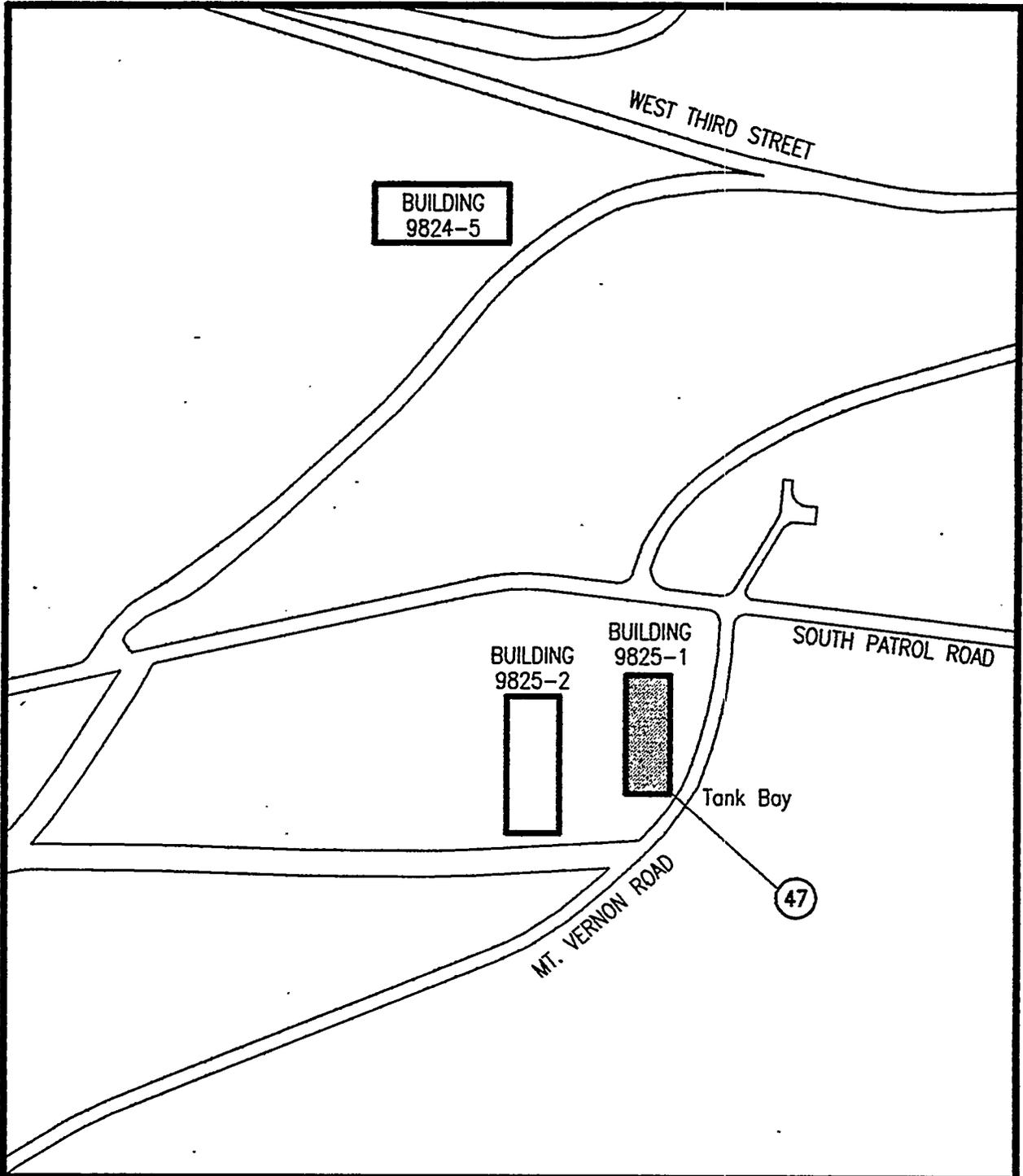
MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2072-U BLDG. 9418-3
CONTENTS: URANIUM OXIDE

83042R1/DWGS/3069
CNO FILE NAME

REV. 1 - 7/22/94
REV. - DATE



LEGEND:

-  ... UST Directory Number
-  Road
-  Building
-  Fence

Y-12 PLANT NORTH



MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT

NOT TO SCALE

OAK RIDGE Y-12 PLANT
UST 2129-U CHESTNUT RIDGE
CONTENTS: URANIUM OXIDE

93042R1/DWGS/30610
CAD FILE NAME

REV. 1 - 7/22/94
REV. - DATE

4.0 Y-12 UST PROGRAM WASTE MANAGEMENT PRACTICES

The Y-12 UST Management Program generates an intermittent waste stream that is derived from three potential sources. The first potential source is from investigation derived waste (IDW) from ongoing UST site assessment activities. The second source of potentially contaminated environmental media is the Y-12 UST upgrade program that produces waste during tank removal and related construction activities. Finally, corrective action options proposed for remediation of contaminated soil and groundwater at UST sites will generate significant waste streams if implemented. A summary of the wastes managed from the three potential sources noted above is presented in Figure 2.

Waste management practices for the Y-12 UST Management Program will be performed in accordance with applicable EPA and TDEC regulations, DOE Orders, and Energy Systems policies and procedures.

4.1 Investigation Derived Waste

Investigation activities associated with the Y-12 UST Management Program generate small volumes of IDW (primarily soil media) on an intermittent basis. Typical activities that will produce IDW include General Facility Site Checks, Initial Site Characterizations, Environmental Assessments, and site monitoring. These activities may generate decontamination fluids, well development and purge water, debris (e.g., concrete), soil drill cuttings, solvents and oils, personnel protective equipment and other related waste, asbestos insulation, and miscellaneous solid and/or liquid wastes (e.g., residual analytical sample).

All IDW generated in the field is drummed or covered with plastic sheeting pending analytical characterization. Types of analytical characterization information that are typically available for IDW include field screening results, laboratory analytical results for associated environmental samples, and the results of Toxicity Characteristic Leaching Procedure (TCLP) analyses for wastes to undergo disposal by landfilling. Based on the results of characterization, clean waste soil will be transferred to a Y-12 Plant landfill or used as land application. Contaminated waste soil will be appropriately containerized, labeled, and placed within an appropriate and approved storage area [e.g., Toxic Substances Control Act (TSCA) or RCRA storage area] pending final treatment and/or disposal. All IDW liquid waste will be transferred to a Y-12 Plant groundwater treatment facility or a liquid storage facility.

Management of laboratory waste derived from Y-12 Plant UST sites is performed in accordance with approved laboratory waste management plans and laboratory best management practices. The analytical residues associated with current UST activities are relatively small in volume and do not warrant separate handling.

4.2 UST Upgrade Program Derived Waste

The Y-12 Plant UST upgrade program consists of the ongoing activities to improve or decommission existing UST systems to meet TDEC requirements and Energy Systems best management practice standards. In general, these activities consist of tank removal and closure assessment sampling. Wastes generated during these activities include excavated soil, surface materials, tank units and associated piping, and closure assessment sampling and analytical wastes.

Excavated soil and surface materials are stockpiled at or near the UST sites, and are covered with plastic sheeting pending analytical characterization. Characterization is accomplished in the same manner as was previously noted for IDW. Tanks and piping are purged and screened for explosive vapors prior to removal. This equipment is screened a second time before being

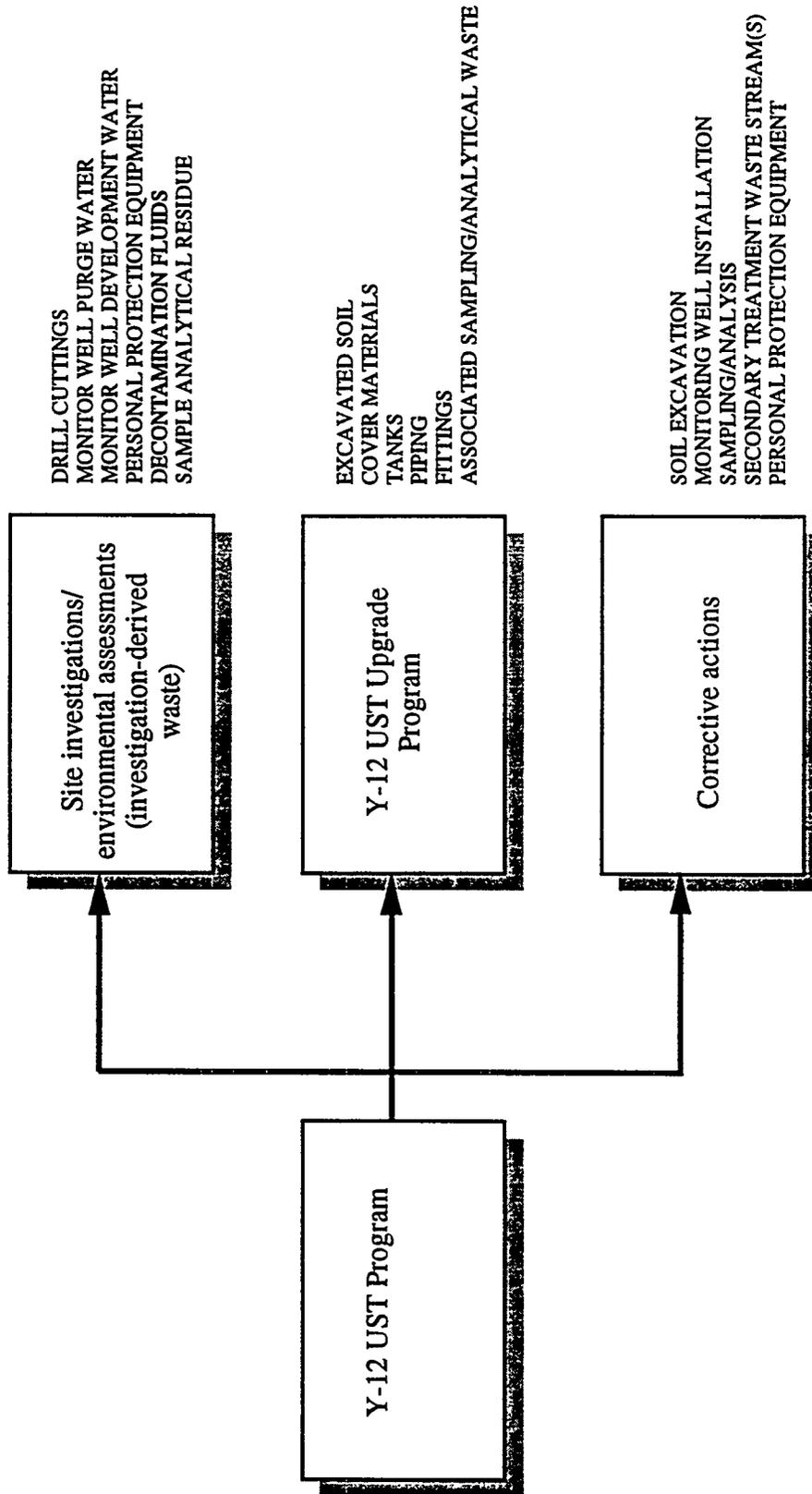


Figure 2. UST waste management flowchart

transferred to the Y-12 Plant scrap yard. Applicable tank identification and labeling requirements are adhered to, and all shipping and disposal records are maintained by the Y-12 UST Management Program. If the tanks are found to be in good condition, they may be re-used by Energy Systems or sold. Tanks and piping found to be in poor condition are wrapped in plastic upon removal and transferred to the Y-12 Plant scrap yard where they are crushed, cut apart, and either sold as scrap or recycled. Sampling and analytical wastes are managed in the same manner as was previously noted for IDW.

4.3 Corrective Action Derived Waste

Each of the Y-12 Plant UST sites that has soil and/or groundwater contamination above applicable TDEC levels may undergo corrective action if numerical site ranking results exceed the site action number, or if a site-specific standard is not approved by TDEC. The corrective action(s) chosen for remediation will be developed and approved by TDEC on a site-specific basis. Typical remedial activities will generate a number of potential waste streams. These wastes would be derived from the following: soil excavation activities, recovery and monitoring well installation and development, sampling and analysis activities, treatment of contaminated media, confirmatory sampling and analysis, and personnel protective equipment used during remedial activities.

Most of the waste types noted above will be handled and disposed of in the same manner as was previously noted for IDW and upgrade program derived waste. Secondary waste streams generated during remediation may include contaminated leachate, runoff, or ash that will be appropriately containerized, labeled, and placed within an appropriate and approved storage area (e.g., TSCA or RCRA storage area) pending final treatment and/or disposal. Clean soil will be landfilled or used for direct land application at the Y-12 Plant, and clean water will be released through a National Pollutant Discharge Elimination System (NPDES) permitted outfall.

4.4 Mixed Waste

Any environmental media from a Y-12 Plant UST site that are contaminated by radiological material will be segregated during investigation, upgrade, and remedial activities. DOE and Energy Systems policies and procedures for handling radiologically contaminated materials will be adhered to, and all such waste will be segregated, characterized, stored, and disposed of in accordance with this guidance. UST regulatory authorities will be notified of the occurrence of radiologically contamination when discovered at Y-12 Plant UST sites.

DISTRIBUTION

**Health, Safety, Environment, and
Accountability Organization**

U.S. Department of Energy

D.E. Bohrman (2)
L.L. Cunningham/E.M. Ingram

E.M. Atkins
R.J. Spence/W.G. McMillian
S.R. Lankford

Environmental Compliance Organization

A.K. Lee/DOE-OSTI (2)
Y-12 Central Files

S.H. Welch

APPENDIX A

**APPLICABLE PORTIONS OF THE
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION,
AND LIABILITY ACT**

**COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND
LIABILITY ACT**

(SUPERFUND)

as amended¹

An Act to provide for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous waste disposal sites.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress Assembled,

SHORT TITLE AND TABLE OF CONTENTS

This Act may be cited as the "Comprehensive Environmental Response, Compensation, and Liability Act of 1980".

TITLE I—HAZARDOUS SUBSTANCES RELEASES, LIABILITY, COMPENSATION

- Sec. 101. Definitions
- Sec. 102. Reportable Quantities and Additional Designation
- Sec. 103. Notices, Penalties
- Sec. 104. Response Authorities
- Sec. 105. National Contingency Plan
- Sec. 106. Abatement Action
- Sec. 107. Liability
- Sec. 108. Financial Responsibility
- Sec. 109. Civil Penalties and Awards
- Sec. 110. Employee Protection
- Sec. 111. Uses of Fund
- Sec. 112. Claims Procedure
- Sec. 113. Litigation, Jurisdiction and Venue
- Sec. 114. Relationship to Other Law
- Sec. 115. Authority to Delegate, Issue Regulations
- Sec. 116. Schedules
- Sec. 117. Public Participation
- Sec. 118. High Priority for Drinking Water Supplies
- Sec. 119. Response Action Contractors
- Sec. 120. Federal Facilities
- Sec. 121. Cleanup Standards
- Sec. 122. Settlement
- Sec. 123. Reimbursement to Local Governments
- Sec. 124. Methane Recovery
- Sec. 125. Section 3001(b)(3)(a)(i) Waste
- Sec. 126. Indian Tribes

¹Public Law 96-510, as amended by PL 97-216, July 18, 1982; PL 97-272, September 30, 1982; PL 98-45, July 12, 1983; PL 99-160, November 25, 1985; PL 99-499 (Superfund Amendments and Reauthorization Act), October 17, 1986; PL 100-202, December 22, 1987; and PL 100-707, November 23, 1988; PL 101-221, December 12, 1989; PL 101-239, December 19, 1989; PL 101-380, August 18, 1990; PL 101-508, November 5, 1990; PL 101-584, November 15, 1990.

subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.

(9) The term "facility" means (A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

(10) The term "federally permitted release" means (A) discharges in compliance with a permit under section 402 of the Federal Water Pollution Control Act, (B) discharges resulting from circumstances identified and reviewed and made part of the public record with respect to a permit issued or modified under section 402 of the Federal Water Pollution Control Act and subject to a condition of such permit, (C) continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of the Federal Water Pollution Control Act, which are caused by events occurring within the scope of relevant operating or treatment systems, (D) discharges in compliance with a legally enforceable permit under section 404 of the Federal Water Pollution Control Act, (E) releases in compliance with a legally enforceable final permit issued pursuant to section 3005(a) through (d) of the Solid Waste Disposal Act [42 U.S.C. 6925(a)-(d)] from a hazardous waste treatment, storage, or disposal facility when such permit specifically identifies the hazardous substances and makes such substances subject to a standard of practice, control procedure or bioassay limitation or condition, or other control on the hazardous substances in such releases, (F) any release in compliance with a legally enforceable permit issued under section 102 or section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972, (G) any injection of fluids authorized under Federal underground injection control programs or State programs submitted for Federal approval (and not disapproved by the Administrator of the Environmental Protection Agency) pursuant to part C of the Safe Drinking Water Act [42 U.S.C. 300h et seq.], (H) any emission into the air subject to a permit or control regulation under section 111 [42 U.S.C. 7411], section 112 [42 U.S.C. 7412], title I part C [42 U.S.C. 7470 et seq.], title I part D [42 U.S.C. 7501 et seq.], or State implementation plans submitted in accordance with section 110 of the Clean Air Act [42 U.S.C. 7410] (and not disapproved by the Administrator of the Environmental Protection Agency), including any schedule or waiver granted, promulgated, or approved under these sections, (I) any injection of fluids or other materials authorized under applicable State law (i) for the purpose of stimulating or treating wells for the production of crude oil, natural gas, or water, (ii) for the purpose of secondary, tertiary, or other enhanced recovery of crude oil or natural gas, or (iii) which are brought to the surface in conjunction with the production of crude oil or natural gas and which are reinjected, (J) the introduction of any pollutant into a publicly owned treatment works when such pollutant is specified in and in compliance with applicable pretreatment standards of section 307 (b) or (c) of the Clean Water Act and enforceable requirements in a pretreatment program submitted by a State or municipality for Federal approval under section 402 of such Act, and (K) any release of source, special nuclear, or byproduct material, as those terms are defined in the Atomic Energy Act of 1954 [42 U.S.C. 2011 et seq.], in compliance with a legally enforceable license, permit, regulation, or order issued pursuant to the Atomic Energy Act of 1954.

(11) The term "Fund" or "Trust Fund" means the Hazardous Substance Response Fund established by section 221 of this Act or, in the case of a hazardous waste disposal facility for which liability has been transferred under section 107(k) of this Act, the Post-closure Liability Fund established by section 232 of this Act.

(12) The term "ground water" means water in a saturated zone or stratum beneath the surface of land or water.

(13) The term "guarantor" means any person, other than the owner or operator, who provides evidence of financial responsibility for an owner or operator under this Act.

(14) The term "hazardous substance" means (A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act, (B) any element, compound, mixture, solution, or substance designated pursuant to section 102 of this Act, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [42 U.S.C. 6921] (but not including any waste the regulation of which under the Solid Waste

Disposal Act [42 U.S.C. 6901 et seq.] has been suspended by Act of Congress), (D) any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act [42 U.S.C. 7412], and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

(15) The term "navigable waters" or "navigable waters of the United States" means the waters of the United States, including the territorial seas.

(16) The term "natural resources" means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the fishery conservation zone established by the Fishery Conservation and Management Act of 1976 [16 U.S.C. 1801 et seq.]), any State, local government, or any foreign government, any Indian tribe, or, if such resources are subject to a trust restriction or alienation, any member of an Indian tribe.

(17) The term "offshore facility" means any facility of any kind located in, on, or under, any of the navigable waters of the United States, and any facility of any kind which is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel.

(18) The term "onshore facility" means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under, any land or nonnavigable waters within the United States.

(19) The term "otherwise subject to the jurisdiction of the United States" means subject to the jurisdiction of the United States by virtue of United States citizenship, United States vessel documentation or numbering, or as provided by international agreement to which the United States is a party.

(20)(A) The term "owner or operator" means (i) in the case of a vessel, any person owning, operating, or chartering by demise, such vessel, (ii) in the case of an onshore facility or an offshore facility, any person owning or operating such facility, and (iii) in the case of any abandoned facility, title or control of which was conveyed due to bankruptcy, foreclosure, tax delinquency, abandonment, or similar means to a unit of State or local government, any person who owned, operated, or otherwise controlled activities at such facility immediately beforehand. Such term does not include a person, who, without participating in the management of a vessel or facility, holds indicia of ownership primarily to protect his security interest in the vessel or facility.

(B) In the case of a hazardous substance which has been accepted for transportation by a common or contract carrier and except as provided in section 107(a)(3) or (4) of this Act, (i) the term "owner or operator" shall mean such common carrier or other bona fide for hire carrier acting as an independent contractor during such transportation, (ii) the shipper of such hazardous substance shall not be considered to have caused or contributed to any release during such transportation which resulted solely from circumstances or conditions beyond his control.

(C) In the case of a hazardous substance which has been delivered by a common or contract carrier to a disposal or treatment facility and except as provided in section 107(a)(3) or (4) of this Act, (i) the term "owner or operator" shall not include such common or contract carrier, and (ii) such common or contract carrier shall not be considered to have caused or contributed to any release at such disposal or treatment facility resulting from circumstances or conditions beyond its control.

(D) The term "owner or operator" does not include a unit of State or local government which acquired ownership or control involuntarily through bankruptcy, tax delinquency, abandonment, or other circumstances in which the government involuntarily acquires title by virtue of its function as sovereign. The exclusion provided under this paragraph shall not apply to any State or local government which has caused or contributed to the release or threatened release of a hazardous substance from the facility, and such a State or local government shall be subject

to the transportation movement, and at the ordinary operating convenience of a common or contract carrier, and any such stoppage shall be considered as a continuity of movement and not as the storage of a hazardous substance.

(27) The terms "United States" and "State" include the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Commonwealth of the Northern Marianas, and any other territory or possession over which the United States has jurisdiction.

(28) The term "vessel" means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water.

(29) The terms "disposal", "hazardous waste", and "treatment" shall have the meaning provided in section 1004 of the Solid Waste Disposal Act [42 U.S.C. 6903].

(30) The terms "territorial sea" and "contiguous zone" shall have the meaning provided in section 502 of the Federal Water Pollution Control Act.

(31) The term "national contingency plan" means the national contingency plan published under section 311(c) of the Federal Water Pollution Control Act or revised pursuant to section 105 of this Act.

(32) The terms "liable" or "liability" under this title shall be construed to be the standard of liability which obtains under section 311 of the Federal Water Pollution Control Act.

(33) The term "pollutant or contaminant" shall include, but not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring; except that the term "pollutant or contaminant" shall not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of paragraph (14) and shall not include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas).

(34) The term "alternative water supplies" includes, but is not limited to, drinking water and household water supplies.

(35)(A) The term "contractual relationship", for the purpose of section 107(b)(3) includes, but is not limited to, land contracts, deeds or other instruments transferring title or possession, unless the real property on which the facility concerned is located was acquired by the defendant after the disposal or placement of the hazardous substance on, in, or at the facility, and one or more of the circumstances described in clause (i), (ii), or (iii) is also established by the defendant by a preponderance of the evidence:

(i) At the time the defendant acquired the facility the defendant did not know and had no reason to know that any hazardous substance which is the subject of the release or threatened release was disposed of on, in, or at the facility.

(ii) The defendant is a government entity which acquired the facility by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation.

(iii) The defendant acquired the facility by inheritance or bequest.

In addition to establishing the foregoing, the defendant must establish that he has satisfied the requirements of section 107(b)(3)(a) and (b).

(B) To establish that the defendant had no reason to know, as provided in clause (i) of subparagraph (A) of this paragraph, the defendant must have undertaken, at the time of acquisition, all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice in an effort to minimize liability. For purposes of the preceding sentence the court shall take into account any specialized knowledge or experience on the part of the defendant, the relationship of the purchase price to the value of the property if uncontaminated, commonly known or reasonably ascertainable information about the property, the obviousness of the presence or likely presence of contamination at the property, and the ability to detect such contamination by appropriate inspection.

Attorney General of the United States and to the Administrator of the Environmental Protection Agency.

RELATIONSHIP TO OTHER LAW

[42 U.S.C. 9614]

Sec. 114. (a) Nothing in this Act shall be construed or interpreted as preempting any State from imposing any additional liability or requirements with respect to the release of hazardous substances within such State.

(b) Any person who receives compensation for removal costs or damages or claims pursuant to this Act shall be precluded from recovering compensation for the same removal costs or damages or claims pursuant to any other State or Federal law. Any person who receives compensation for removal costs or damages or claims pursuant to any other Federal or State law shall be precluded from receiving compensation for the same removal costs or damages or claims as provided in this Act.

(c) Recycled oil. —

(1) Service station dealers, etc. — No person (including the United States or any State) may recover, under the authority of subsection (a)(3) or (a)(4) of section 107, from a service station dealer for any response costs or damages resulting from a release or threatened release of recycled oil, or use the authority of section 106 against a service station dealer other than a person described in subsection (a)(1) or (a)(2) of section 107, if such recycled oil —

(A) is not mixed with any other hazardous substance, and

(B) is stored, treated, transported, or otherwise managed in compliance with regulations or standards promulgated pursuant to section 3014 of the Solid Waste Disposal Act and other applicable authorities.

Nothing in this paragraph shall affect or modify in any way the obligation or liability of any person under any other provision of State or Federal law, including common law, for damages injury, or loss resulting from a release or threatened release of any hazardous substance or for removal or remedial action or the costs of removal or remedial action.

(2) Presumption. — Solely for the purposes of this subsection, a service station dealer may presume that a small quantity of used oil is not mixed with other hazardous substances if it —

(A) has been removed from the engine of a light duty motor vehicle or household appliances by the owner of such vehicle or appliances, and

(B) is presented, by such owner, to the dealer for collection, accumulation, and delivery to an oil recycling facility.

(3) Definition. — For purposes of this subsection, the terms “used oil” and “recycled oil” have the same meanings as set forth in section 1004(36) and 1994(37) of the Solid Waste Disposal Act and regulations promulgated pursuant to that Act.

(4) Effective date. — The effective date of paragraphs (1) and (2) of this subsection shall be the effective date of regulations or standards promulgated under section 3014 of the Solid Waste Disposal Act that include, among other provisions, a requirement to conduct corrective action to respond to any releases of recycled oil under subtitle C or subtitle I of such Act.

(d) Except as provided in this title, no owner or operator of a vessel or facility who establishes and maintains evidence of financial responsibility in accordance with this title shall be required under any State or local law, rule, or regulation to establish or maintain any other evidence of financial responsibility in connection with liability for the release of a hazardous substance from such vessel or facility. Evidence of compliance with the financial responsibility requirements of this title shall be accepted by a State in lieu of any other requirement of financial responsibility imposed by such State in connection with liability for the release of a hazardous substance from such vessel or facility.

AUTHORITY TO DELEGATE, ISSUE REGULATIONS

[42 U.S.C. 9415]

Sec. 115. The President is authorized to delegate and assign any duties or powers imposed upon or assigned to him and to promulgate any regulations necessary to carry out the provisions of this title.

recipient to accomplish a public purpose in which substantial EPA involvement is anticipated during the performance of the project.

"Discharge" as defined by section 311(a)(2) of the CWA, includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil, but excludes discharges in compliance with a permit under section 402 of the CWA, discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under section 402 of the CWA, and subject to a condition in such permit, or continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of the CWA, that are caused by events occurring within the scope of relevant operating or treatment systems. For purposes of the NCP, discharge also means threat of discharge.

"Dispersants" means those chemical agents that emulsify, disperse, or solubilize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

"Drinking water supply" as defined by section 101(7) of CERCLA, means any raw or finished water source that is or may be used by a public water system (as defined in the Safe Drinking Water Act) or as drinking water by one or more individuals.

"Environment" as defined by section 101(8) of CERCLA, means the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Magnuson Fishery Conservation and Management Act; and any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.

"Facility" as defined by section 101(9) of CERCLA, means any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or any site or area, where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include

any consumer product in consumer use or any vessel.

"Feasibility study" (FS) means a study undertaken by the lead agency to develop and evaluate options for remedial action. The FS emphasizes data analysis and is generally performed concurrently and in an interactive fashion with the remedial investigation (RI), using data gathered during the RI. The RI data are used to define the objectives of the response action, to develop remedial action alternatives, and to undertake an initial screening and detailed analysis of the alternatives. The term also refers to a report that describes the results of the study.

"First federal official" means the first federal representative of a participating agency of the National Response Team to arrive at the scene of a discharge or a release. This official coordinates activities under the NCP and may initiate, in consultation with the OSC, any necessary actions until the arrival of the predesignated OSC. A state with primary jurisdiction over a site covered by a cooperative agreement will act in the stead of the first federal official for any incident at the site.

"Fund or Trust Fund" means the Hazardous Substance Superfund established by section 9507 of the Internal Revenue Code of 1986.

"Ground water" as defined by section 101(12) of CERCLA, means water in a saturated zone or stratum beneath the surface of land or water.

"Hazard Ranking System" (HRS) means the method used by EPA to evaluate the relative potential of hazardous substance releases to cause health or safety problems, or ecological or environmental damage.

"Hazardous substance" as defined by section 101(14) of CERCLA, means: Any substance designated pursuant to section 311(b)(2)(A) of the CWA; any element, compound, mixture, solution, or substance designated pursuant to section 102 of CERCLA; any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress); any toxic pollutant listed under section 307(a) of the CWA; any hazardous air pollutant listed under section 112 of the Clean Air Act; and any

§300.5

40 CFR Ch. 1

imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance in the first sentence of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

"Indian tribe" as defined by section 101(36) of CERCLA, means any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village but not including any Alaska Native regional or village corporation, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

"Inland waters," for the purposes of classifying the size of discharges, means those waters of the United States in the inland zone, waters of the Great Lakes, and specified ports and harbors on inland rivers.

"Inland zone" means the environment inland of the coastal zone excluding the Great Lakes and specified ports and harbors on inland rivers. The term inland zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/USCG agreements and identified in federal regional contingency plans.

"Lead agency" means the agency that provides the OSC/RPM to plan and implement response action under the NCP. EPA, the USCG, another federal agency, or a state (or political subdivision of a state) operating pursuant to a contract or cooperative agreement executed pursuant to section 104(d)(1) of CERCLA, or designated pursuant to a Superfund Memorandum of Agreement (SMOA) entered into pursuant to subpart F of the NCP or other agreements may be the lead agency for a response action. In the case of a release of a hazardous substance, pollutant, or contaminant, where the release is on, or the sole source of the release is from, any facility or vessel under the jurisdiction, custody, or control of Department of Defense (DOD) or Department of Energy (DOE), then DOD or DOE will be the lead agency. Where the release is on, or the sole source of the

release is from, any facility or vessel under the jurisdiction, custody, or control of a federal agency other than EPA, the USCG, DOD, or DOE, then that agency will be the lead agency for remedial actions and removal actions other than emergencies. The federal agency maintains its lead agency responsibilities whether the remedy is selected by the federal agency for non-NPL sites or by EPA and the federal agency or by EPA alone under CERCLA section 120. The lead agency will consult with the support agency, if one exists, throughout the response process.

"Management of migration" means actions that are taken to minimize and mitigate the migration of hazardous substances or pollutants or contaminants and the effects of such migration. Measures may include, but are not limited to, management of a plume of contamination, restoration of a drinking water aquifer, or surface water restoration.

"Miscellaneous oil spill control agent" is any product, other than a dispersant, sinking agent, surface collecting agent, biological additive, or burning agent, that can be used to enhance oil spill cleanup, removal, treatment, or mitigation.

"National Priorities List" (NPL) means the list, compiled by EPA pursuant to CERCLA section 105, of uncontrolled hazardous substance releases in the United States that are priorities for long-term remedial evaluation and response.

"Natural resources" means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the exclusive economic zone defined by the Magnuson Fishery Conservation and Management Act of 1976), any state or local government, any foreign government, any Indian tribe, or, if such resources are subject to a trust restriction on alienation, any member of an Indian tribe.

"Navigable waters," as defined by 40 CFR 110.1, means the waters of the United States, including the territorial seas. The term includes:

(a) All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;

(b) Interstate waters, including interstate wetlands;

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) That are or could be used by interstate or foreign travelers for recreational or other purposes;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce;

(3) That are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as navigable waters under this section;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition, including adjacent wetlands; and

(f) Wetlands adjacent to waters identified in paragraphs (a) through (e) of this definition: Provided, that waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the United States.

"Offshore facility" as defined by section 101(17) of CERCLA and section 311(a)(11) of the CWA, means any facility of any kind located in, on, or under any of the navigable waters of the United States and any facility of any kind which is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel.

"Oil" as defined by section 311(a)(1) of the CWA, means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.

"Oil pollution fund" means the fund established by section 311(k) of the CWA.

"On-scene coordinator" (OSC) means the federal official predesignated by EPA or the USCG to coordinate and direct federal responses under subpart D, or the official designated by the lead agency to coordinate and direct removal actions under subpart E of the NCP.

"Onshore facility" as defined by section 101(18) of CERCLA, means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind

located in, on, or under any land or non-navigable waters within the United States; and, as defined by section 311(a)(10) of the CWA, means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under any land within the United States other than submerged land.

"On-site" means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action.

"Operable unit" means a discrete action that comprises an incremental step toward comprehensively addressing site problems. This discrete portion of a remedial response manages migration, or eliminates or mitigates a release, threat of a release, or pathway of exposure. The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the site. Operable units may address geographical portions of a site, specific site problems, or initial phases of an action, or may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site.

"Operation and maintenance" (O&M) means measures required to maintain the effectiveness of response actions.

"Person" as defined by section 101(21) of CERCLA, means an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, United States government, state, municipality, commission, political subdivision of a state, or any interstate body.

"Pollutant or contaminant" as defined by section 101(33) of CERCLA, shall include, but not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under section

101(14) (A) through (F) of CERCLA, nor does it include natural gas, liquified natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas). For purposes of the NCP, the term pollutant or contaminant means any pollutant or contaminant that may present an imminent and substantial danger to public health or welfare.

"Post-removal site control" means those activities that are necessary to sustain the integrity of a Fund-financed removal action following its conclusion. Post-removal site control may be a removal or remedial action under CERCLA. The term includes, without being limited to, activities such as relighting gas flares, replacing filters, and collecting leachate.

"Preliminary assessment" (PA) means review of existing information and an off-site reconnaissance, if appropriate, to determine if a release may require additional investigation or action. A PA may include an on-site reconnaissance, if appropriate.

"Public participation," see the definition for community relations.

"Public vessel" as defined by section 311(a)(4) of the CWA, means a vessel owned or bareboat-chartered and operated by the United States, or by a state or political subdivision thereof, or by a foreign nation, except when such vessel is engaged in commerce.

"Quality assurance project plan" (QAPP) is a written document, associated with all remedial site sampling activities, which presents in specific terms the organization (where applicable), objectives, functional activities, and specific quality assurance (QA) and quality control (QC) activities designed to achieve the data quality objectives of a specific project(s) or continuing operation(s). The QAPP is prepared for each specific project or continuing operation (or group of similar projects or continuing operations). The QAPP will be prepared by the responsible program office, regional office, laboratory, contractor, recipient of an assistance agreement, or other organization. For an enforcement action, potentially responsible parties may prepare a QAPP subject to lead agency approval.

"Release" as defined by section 101(22) of CERCLA, means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment

(including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant), but excludes: Any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons; emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine; release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954, if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under section 170 of such Act, or, for the purposes of section 104 of CERCLA or any other response action, any release of source, byproduct, or special nuclear material from any processing site designated under section 102(a)(1) or 302(a) of the Uranium Mill Tailings Radiation Control Act of 1978; and the normal application of fertilizer. For purposes of the NCP, release also means threat of release.

"Relevant and appropriate requirements" means those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site. Only those state standards that are identified in a timely manner and are more stringent than federal requirements may be relevant and appropriate.

"Remedial design" (RD) means the technical analysis and procedures which follow the selection of remedy for a site and result in a detailed set of plans and specifications for implementation of the remedial action.

"Remedial investigation" (RI) is a process undertaken by the lead agency to determine the nature and extent of the problem presented by the release. The RI emphasizes data collection and site characterization, and is generally performed concurrently and in an

designated by the EPA Administrator, Governor, SERC, or LEPC, as appropriate.

§300.220 Related Title III issues.

Other related Title III requirements are found in 40 CFR part 355.

**Subpart D—Operational Response
Phases for Oil Removal**

**§300.300 Phase I—Discovery or
notification.**

(a) A discharge of oil may be discovered through:

(1) A report submitted by the person in charge of a vessel or facility, in accordance with statutory requirements;

(2) Deliberate search by patrols;

(3) Random or incidental observation by government agencies or the public; or

(4) Other sources.

(b) Any person in charge of a vessel or a facility shall, as soon as he or she has knowledge of any discharge from such vessel or facility in violation of section 311(b)(3) of the Clean Water Act, immediately notify the NRC. If direct reporting to the NRC is not practicable, reports may be made to the USCG or EPA pre-designated OSC for the geographic area where the discharge occurs. The EPA pre-designated OSC may also be contacted through the regional 24-hour emergency response telephone number. All such reports shall be promptly relayed to the NRC. If it is not possible to notify the NRC or pre-designated OSC immediately, reports may be made immediately to the nearest Coast Guard unit. In any event such person in charge of the vessel or facility shall notify the NRC as soon as possible.

(c) Any other person shall, as appropriate, notify the NRC of a discharge of oil.

(d) Upon receipt of a notification of discharge, the NRC shall promptly notify the OSC. The OSC shall proceed with the following phases as outlined in the RCP and OSC contingency plan.

**§300.305 Phase II—Preliminary
assessment and initiation of
action.**

(a) The OSC is responsible for promptly initiating a preliminary assessment.

(b) The preliminary assessment shall be conducted using available information, supplemented where necessary and

possible by an on-scene inspection. The OSC shall undertake actions to:

(1) Evaluate the magnitude and severity of the discharge or threat to public health or welfare or the environment;

(2) Assess the feasibility of removal;

(3) To the extent practicable, identify potentially responsible parties; and

(4) Ensure that authority exists for undertaking additional response actions.

(c) The OSC, in consultation with legal authorities when appropriate, shall make a reasonable effort to have the discharger voluntarily and promptly perform removal actions. The OSC shall ensure adequate surveillance over whatever actions are initiated. If effective actions are not being taken to eliminate the threat, or if removal is not being properly done, the OSC shall, to the extent practicable under the circumstances, so advise the responsible party. If the responsible party does not take proper removal actions, or is unknown, or is otherwise unavailable, the OSC shall, pursuant to section 311(c)(1) of the CWA, determine whether authority for a federal response exists, and, if so, take appropriate response actions. Where practicable, continuing efforts should be made to encourage response by responsible parties.

(d) If natural resources are or may be injured by the discharge, the OSC shall ensure that state and federal trustees of affected natural resources are promptly notified in order that the trustees may initiate appropriate actions, including those identified in subpart G. The OSC shall seek to coordinate assessments, evaluations, investigations, and planning with state and federal trustees.

**§300.310 Phase III—Containment,
countermeasures, cleanup,
and disposal.**

(a) Defensive actions shall begin as soon as possible to prevent, minimize, or mitigate threat(s) to public health or welfare or the environment. Actions may include but are not limited to: Analyzing water samples to determine the source and spread of the oil; controlling the source of discharge; measuring and sampling; source and spread control or salvage operations; placement of physical barriers to deter the spread of the oil and to protect natural resources; control of the water discharged from upstream impoundment; and the use of chemicals and other materials in accordance with subpart

J of this part to restrain the spread of the oil and mitigate its effects.

(b) As appropriate, actions shall be taken to recover the oil or mitigate its effects. Of the numerous chemical or physical methods that may be used, the chosen methods shall be the most consistent with protecting public health and welfare and the environment. Sinking agents shall not be used.

(c) Oil and contaminated materials recovered in cleanup operations shall be disposed of in accordance with the RCP and OSC contingency plan and any applicable laws, regulations, or requirements.

§300.315 Phase IV—Documentation and cost recovery.

(a) Documentation shall be collected and maintained to support all actions taken under the CWA and to form the basis for cost recovery. Whenever practicable, documentation shall be sufficient to prove the source and circumstances of the incident, the responsible party or parties, and impact and potential impacts to public health and welfare and the environment. When appropriate, documentation shall also be collected for scientific understanding of the environment and for the research and development of improved response methods and technology. Damages to private citizens, including loss of earnings, are not addressed by the NCP. Evidentiary and cost documentation procedures are specified in the USCG Marine Safety Manual (Commandant Instruction M16000.11) and further provisions are contained in 33 CFR part 153.

(b) OSCs shall submit OSC reports to the RRT as required by §300.165.

(c) OSCs shall ensure the necessary collection and safeguarding of information, samples, and reports. Samples and information shall be gathered expeditiously during the response to ensure an accurate record of the impacts incurred. Documentation materials shall be made available to the trustees of affected natural resources. The OSC shall make available to trustees of the affected natural resources information and documentation that can assist the trustees in the determination of actual or potential natural resource injuries.

(d) Information and reports obtained by the EPA or USCG OSC shall be transmitted

to the appropriate offices responsible for follow-up actions.

§300.320 General pattern of response.

(a) When the OSC receives a report of a discharge, actions normally should be taken in the following sequence:

(1) When the reported discharge is an actual or potential major discharge, immediately notify the RRT, including the affected state, if appropriate, and the NRC.

(2) Investigate the report to determine pertinent information such as the threat posed to public health or welfare or the environment, the type and quantity of polluting material, and the source of the discharge.

(3) Officially classify the size of the discharge and determine the course of action to be followed.

(4) Determine whether a discharger or other person is properly carrying out removal. Removal is being done properly when:

(i) The cleanup is fully sufficient to minimize or mitigate threat(s) to public health and welfare and the environment. Removal efforts are improper to the extent that federal efforts are necessary to minimize further or mitigate those threats; and

(ii) The removal efforts are in accordance with applicable regulations, including the NCP.

(5) Determine whether a state or political subdivision thereof has the capability to carry out response actions and whether a contract or cooperative agreement has been established with the appropriate fund administrator for this purpose.

(6) Notify the trustees of affected natural resources in accordance with the applicable RCP.

(b) The preliminary inquiry will probably show that the situation falls into one of four categories. These categories and the appropriate response to each are outlined below:

(1) If the investigation shows that no discharge occurred, or it shows a minor discharge with no removal action required, the case may be closed for response purposes.

(2) If the investigation shows a minor discharge with the responsible party taking proper removal action, contact shall be established with the party. The removal action shall, whenever possible, be

monitored to ensure continued proper action.

(3) If the investigation shows a minor discharge with improper removal action being taken, the following measures shall be taken:

(i) An immediate effort shall, as appropriate, be made to stop further pollution and remove past and ongoing contamination.

(ii) The responsible party shall be advised of what action will be considered appropriate.

(iii) If the responsible party does not properly respond, the party shall be notified of potential liability for federal response performed under the CWA. This liability includes all costs of removal and may include the costs of assessing and restoring, rehabilitating, replacing, or acquiring the equivalent of damaged natural resources, and other actual or necessary costs of a federal response.

(iv) The OSC shall notify appropriate state and local officials, keep the RRT advised, and initiate Phase III operations, as described in §300.310, as conditions warrant.

(v) Information shall be collected for possible recovery of response costs in accordance with §300.315.

(4) When the investigation shows that an actual or potential medium or major oil discharge exists, the OSC shall follow the same general procedures as for a minor discharge. If appropriate, the OSC shall recommend activation of the RRT.

§300.330 Wildlife conservation.

The Department of the Interior, Department of Commerce, and state representatives to the RRT shall arrange for the coordination of professional and volunteer groups permitted and trained to participate in wildlife dispersal, collection, cleaning, rehabilitation, and recovery activities, consistent with 16 U.S.C. 703-712 and applicable state laws. The RCP and OSC contingency plans shall, to the extent practicable, identify organizations or institutions that are permitted to participate in such activities and operate such facilities. Wildlife conservation activities will normally be included in Phase III response actions, described in §300.310.

§300.335 Funding.

(a) If the person responsible for the discharge does not act promptly or take

proper removal actions, or if the person responsible for the discharge is unknown, federal discharge removal actions may begin under section 311(c)(1) of the CWA. The discharger, if known, is liable for costs of federal removal in accordance with section 311(f) of the CWA and other federal laws.

(b) Actions undertaken by the participating agencies in response to pollution shall be carried out under existing programs and authorities when available. Federal agencies will make resources available, expend funds, or participate in response to oil discharges under their existing authority. Authority to expend resources will be in accordance with agencies' basic statutes and, if required, through interagency agreements. Where the OSC requests assistance from a federal agency, that agency may be reimbursed in accordance with the provisions of 33 CFR 153.407. Specific interagency reimbursement agreements may be signed when necessary to ensure that the federal resources will be available for a timely response to a discharge of oil. The ultimate decisions as to the appropriateness of expending funds rest with the agency that is held accountable for such expenditures.

(c) The OSC shall exercise sufficient control over removal operations to be able to certify that reimbursement from the following funds is appropriate:

(1) The oil pollution fund, administered by the Commandant, USCG, that has been established pursuant to section 311(k) of the CWA or any other spill response fund established by Congress. Regulations governing the administration and use of the section 311(k) fund are contained in 33 CFR part 153.

(2) The fund authorized by the Deepwater Port Act is administered by the Commandant, USCG. Governing regulations are contained in 33 CFR part 137.

(3) The fund authorized by the Outer Continental Shelf Lands Act, as amended, is administered by the Commandant, USCG. Governing regulations are contained in 33 CFR parts 135 and 136.

(4) The fund authorized by the Trans-Alaska Pipeline Authorization Act is administered by a Board of Trustees under the purview of the Secretary of the Interior. Governing regulations are contained in 43 CFR part 29.

(d) Response actions other than removal, such as scientific investigations not in support of removal actions or law enforcement, shall be provided by the agency with legal responsibility for those specific actions.

(e) The funding of a response to a discharge from a federally operated or supervised facility or vessel is the responsibility of the operating or supervising agency.

(f) The following agencies have funds available for certain discharge removal actions:

(1) EPA may provide funds to begin timely discharge removal actions when the OSC is an EPA representative.

(2) The USCG pollution control efforts are funded under "operating expenses." These funds are used in accordance with agency directives.

(3) The Department of Defense has two specific sources of funds that may be applicable to an oil discharge under appropriate circumstances. This does not consider military resources that might be made available under specific conditions.

(i) Funds required for removal of a sunken vessel or similar obstruction of navigation are available to the Corps of Engineers through Civil Works Appropriations, Operations and Maintenance, General.

(ii) The U.S. Navy may conduct salvage operations contingent on defense operational commitments, when funded by the requesting agency. Such funding may be requested on a direct cite basis.

(4) Pursuant to section 311(c)(2)(H) of the CWA, the state or states affected by a discharge of oil may act where necessary to remove such discharge and may, pursuant to 33 CFR part 153, be reimbursed from the oil pollution fund for the reasonable costs incurred in such a removal.

(i) Removal by a state is necessary within the meaning of section 311(c)(2)(H) of the CWA when the OSC determines that the owner or operator of the vessel, onshore facility, or offshore facility from which the discharge occurs does not effect removal properly, or is unknown, and that:

(A) State action is required to minimize or mitigate significant threat(s) to the public health or welfare or the environment that federal action cannot minimize or mitigate; or

(B) Removal or partial removal can be done by the state at a cost that is less than

or not significantly greater than the cost that would be incurred by the federal agencies.

(ii) State removal actions must be in compliance with the NCP in order to qualify for reimbursement.

(iii) State removal actions are considered to be Phase III actions, described in §300.310, under the same definitions applicable to federal agencies.

(iv) Actions taken by local governments in support of federal discharge removal operations are considered to be actions of the state for purposes of this section. The RCP and OSC contingency plan shall show what funds and resources are available from participating agencies under various conditions and cost arrangements. Interagency agreements may be necessary to specify when reimbursement is required.

Subpart E—Hazardous Substance Response

§300.400 General.

(a) This subpart establishes methods and criteria for determining the appropriate extent of response authorized by CERCLA:

(1) When there is a release of a hazardous substance into the environment; or

(2) When there is a release into the environment of any pollutant or contaminant that may present an imminent and substantial danger to the public health or welfare.

(b) Limitations on response. Unless the lead agency determines that a release constitutes a public health or environmental emergency and no other person with the authority and capability to respond will do so in a timely manner, a removal or remedial action under section 104 of CERCLA shall not be undertaken in response to a release:

(1) Of a naturally occurring substance in its unaltered form, or altered solely through naturally occurring processes or phenomena, from a location where it is naturally found;

(2) From products that are part of the structure of, and result in exposure within, residential buildings or business or community structures; or

(3) Into public or private drinking water supplies due to deterioration of the system through ordinary use.

(c) Fund-financed action. In determining the need for and in planning or undertaking Fund-financed action, the lead agency shall, to the extent practicable:

APPENDIX B

**RESOURCE CONSERVATION AND RECOVERY ACT
40 CFR PART 280**

Environmental Protection Agency

280.10

PART 280—UNDERGROUND STORAGE TANKS

Subpart A—Program Scope and Interim Prohibition

- Sec. 280.10 Applicability.
- 280.11 Interim prohibition for deferred UST systems.
- 280.12 Definitions.

Subpart B—UST Systems: Design, Construction, Installation and Notification

- 280.20 Performance standards for new UST systems.
- 280.21 Upgrading of existing UST systems.
- 280.22 Notification requirements.

Subpart C—General Operating Requirements

- 280.30 Spill and overflow control.
- 280.31 Operation and maintenance of corrosion protection.
- 280.32 Compatibility.
- 280.33 Repairs allowed.
- 280.34 Reporting and recordkeeping.

Subpart D—Release Detection

- 280.40 General requirements for all UST systems.
- 280.41 Requirements for petroleum UST systems.
- 280.42 Requirements for hazardous substance UST systems.
- 280.43 Methods of release detection for tanks.
- 280.44 Methods of release detection for piping.
- 280.45 Release detection recordkeeping.

Subpart E—Release Reporting, Investigation, and Confirmation

- 280.50 Reporting of suspected releases.

- 280.51 Investigation due to off-site impacts.
- 280.52 Release investigation and confirmation steps.
- 280.53 Reporting and cleanup of spills and overfills.

Subpart F—Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances

- 280.60 General.
- 280.61 Initial response.
- 280.62 Initial abatement measures and site check.
- 280.63 Initial site characterization.
- 280.64 Free product removal.
- 280.65 Investigations for soil and ground-water cleanup.
- 280.66 Corrective action plan.
- 280.67 Public participation.

Subpart G—Out-of-Service UST Systems and Closure

- 280.70 Temporary closure.
- 280.71 Permanent closure and changes-in-service.
- 280.72 Assessing the site at closure or change-in-service.
- 280.73 Applicability to previously closed UST systems.
- 280.74 Closure records.

Subpart H—Financial Responsibility

- 280.90 Applicability.
- 280.91 Compliance dates.
- 280.92 Definition of terms.
- 280.93 Amount and scope of required financial responsibility.
- 280.94 Allowable mechanisms and combinations of mechanisms.
- 280.95 Financial test of self-insurance.
- 280.96 Guarantee.
- 280.97 Insurance and risk retention group coverage.
- 280.98 Surety bond.

- 280.99 Letter of credit.
- 280.100 Use of state-required mechanism.
- 280.101 State fund or other state assurance.

- 280.102 Trust fund.
- 280.103 Standby trust fund.
- 280.104 Local government bond rating test.
- 280.105 Local government financial test.
- 280.106 Local government guarantee.
- 280.107 Local government fund.
- 280.108 Substitution of financial assurance mechanisms by owner or operator.
- 280.109 Cancellation or nonrenewal by a provider of financial assurance.

- 280.110 Reporting by owner or operator.
- 280.111 Recordkeeping.
- 280.112 Drawing on financial assurance mechanisms.

- 280.113 Release from the requirements.
- 280.114 Bankruptcy or other incapacity of owner or operator or provider of financial assurance.

- 280.115 Replenishment of guarantees, letters of credit, or surety bonds.
- 280.116 Suspension of enforcement. [Reserved]

Appendix I—Notification for Underground Storage Tanks (Form)

Appendix II—List of Agencies Designated to Receive Notifications

Appendix III—Statement for Shipping Tickets and Invoices

Authority: 42 U.S.C. 6912, 6991(a), 6991(b), 6991(c), 6991(d), 6991(e), 6991(f), 6991(h), 6993(g).
Source: 53 FR 37194, Sept. 23, 1988, unless otherwise noted.
[Amended at 56 FR 38344, Aug. 13, 1991; 56 FR 66373, Dec. 23, 1991; 58 FR 9050, Feb. 18, 1993; 59 FR 9607, Feb. 28, 1994]

Subpart A—Program Scope and Interim Prohibition

280.10 Applicability.

(a) The requirements of this part apply to all owners and operators of an UST system as defined in 280.12 except as otherwise provided in paragraphs (b), (c), and (d) of this section. Any UST system listed in paragraph (c) of this section must meet the requirements of 280.11.

(b) The following UST systems are excluded from the requirements of this part:

(1) Any UST system holding hazardous wastes listed or identified under Subtitle C of the Solid Waste Disposal Act, or a mixture of such hazardous waste and other regulated substances.

(2) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under section 402 or 307(b) of the Clean Water Act.

(3) Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks.

(4) Any UST system whose capacity is 110 gallons or less.

(5) Any UST system that contains a *de minimis* concentration of regulated substances.

(6) Any emergency spill or overflow containment UST system that is expeditiously emptied after use.

(c) *Deferals*. Subparts B, C, D, E, and G do not apply to any of the following types of UST systems:

- (1) Wastewater treatment tank systems;
- (2) Any UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 U.S.C. 2011 and following);
- (3) Any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR Part 50, Appendix A;
- (4) Airport hydrant fuel distribution systems; and
- (5) UST systems with field-constructed tanks.

Environmental Protection Agency

280.12

(d) *Deferred*. Subpart D does not apply to any UST system that stores fuel solely for use by emergency power generators.
[53 FR 37194, Sept. 23, 1988]

280.11 Interim prohibition for deferred UST systems.

(a) No person may install an UST system listed in 280.11(c) for the purpose of storing regulated substances unless the UST system (whether of single- or double-wall construction):

- (1) Will prevent releases due to corrosion or structural failure for the operational life of the UST system;
- (2) Is cathodically protected against corrosion, constructed of noncorrodible material, steel clad with a noncorrodible material, or designed in a manner to prevent the release or threatened release of any stored substance; and
- (3) Is constructed or lined with material that is compatible with the stored substance.

(b) Notwithstanding paragraph (a) of this section, an UST system without corrosion protection may be installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life.

Owners and operators must maintain records that demonstrate compliance with the requirements of this paragraph for the remaining life of the tank.

Note: The National Association of Corrosion Engineers Standard RP-02-85, Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems, may be used as guidance for complying with paragraph (b) of this section.

[53 FR 37194, Sept. 23, 1988]

280.12 Definitions.

Aboveground release means any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the aboveground portion of an UST system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from an UST system.

Ancillary equipment means any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used

sciences and the principles of engineering and mathematics acquired by a professional

qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

Dielectric material means a material that does not conduct direct electrical current.

Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the UST system (e.g., tank from piping).

Electrical equipment means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable. Excavation zone means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation.

Existing tank system means a tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before December 22, 1988.

Installation is considered to have commenced if: (a) The owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if (b)(1) Either a continuous on-site physical construction or installation program has begun;

or, (2) The owner or operator has entered into contractual obligations—which cannot be cancelled or modified without substantial loss—for physical construction at the site or installation of the tank system to be completed within a reasonable time.

Farm tank is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. Farm

includes fish hatcheries, rangeland and nurseries with growing operations.

Flow-through process tank is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process.

Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

Free product refers to a regulated substance that is present as a non-aqueous phase liquid (e.g., liquid not dissolved in water.)

Gathering lines means any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations.

Hazardous substance UST system means an underground storage tank system that contains a hazardous substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under subtitle C) or any mixture of such substances and petroleum, and which is not a petroleum UST system.

Heating oil means petroleum that is No. 1, No. 2, No. 4—light, No. 4—heavy, No. 5—light, No. 5—heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

Hydraulic lift tank means a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

Implementing agency means EPA, or, in the case of a state with a program approved under section 9004 (or pursuant to a memorandum of agreement with EPA), the designated state or local agency responsible for carrying out an approved UST program.

Liquid trap means sumps, well cellars, and other traps used in association with oil and gas production, gathering, and extraction operations

Environmental Protection Agency

(including gas production plants), for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or re-injection into a production or pipeline stream, or may collect and separate liquids from a gas stream.

Maintenance means the normal operational upkeep to prevent an underground storage tank system from releasing product.

Motor fuel means petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasoline, and is typically used in the operation of a motor engine.

New tank system means a tank system that will be used to contain an accumulation of regulated substances and for which installation has commenced after December 22, 1988. (See also Existing Tank System.)

Noncommercial purposes with respect to motor fuel means not for resale.

On the premises where stored with respect to heating oil means UST systems located on the same property where the stored heating oil is used.

Operational life refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed under Subpart G.

Operator means any person in control of, or having responsibility for, the daily operation of the UST system.

Overfill release is a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.

Owner means:

(a) In the case of an UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use, or dispensing of regulated substances; and

(b) In the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned such UST immediately before the discontinuation of its use.

Person means an individual, trust, firm, joint stock company, Federal agency, corporation, state, municipality, commission,

political subdivision of a state, or any interstate body. Person also includes a consortium, a joint venture, a commercial entity, and the United States Government.

Petroleum UST system means an underground storage tank system that contains petroleum or a mixture of petroleum with de minimis quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

Pipe or Piping means a hollow cylinder or tubular conduit that is constructed of non-earthen materials.

Pipeline facilities (including gathering lines) are new and existing pipe rights-of-way and any associated equipment, facilities, or buildings.

Regulated substance means:

(a) Any substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under subtitle C), and

(b) Petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

The term regulated substance includes but is not limited to petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

Release means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into ground water, surface water or subsurface soils.

Release detection means determining whether a release of a regulated substance has occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

Repair means to restore a tank or UST system component that has caused a release of product from the UST system.

Residential tank is a tank located on property used primarily for dwelling purposes. SARA means the Superfund Amendments and Reauthorization Act of 1986.

Septic tank is a water-tight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.

Storm-water or wastewater collection system means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.

Surface impoundment is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well.

Tank is a stationary device designed to contain an accumulation of regulated substances and constructed of non-earthen materials (e.g., concrete, steel, plastic) that provide structural support.

Underground area means an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.

Underground release means any belowground release.

Underground storage tank or UST means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including thereto) is 10 percent or more beneath the surface of the ground. This term does not include any:

(a) Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;

(b) Tank used for storing heating oil for consumptive use on the premises where stored;

(c) Septic tank;

(d) Pipeline facility (including gathering lines) regulated under:

(1) The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.), or

(2) The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.), or

(3) Which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in paragraph (d)(1) or (d)(2) of this definition;

(e) Surface impoundment, pit, pond, or lagoon;

(f) Storm-water or wastewater collection system;

(g) Flow-through process tank;

(h) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or

(i) Storage tank situated in an underground area (such as a basement, cellar, mine-working drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

The term underground storage tank or UST does not include any pipes connected to any tank which is described in paragraphs (a) through (i) of this definition.

Upgrade means the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of product.

UST system or Tank system means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.

Wastewater treatment tank means a tank that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods.

(53 FR 37194, Sept. 23, 1988)

Environmental Protection Agency

Subpart B—UST Systems: Design, Construction, Installation and Notification

280.20 Performance standards for new UST systems.

In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST system is used to store regulated substances, all owners and operators of new UST systems must meet the following requirements.

(a) Tanks. Each tank must be properly designed and constructed, and any portion underground that routinely contains product must be protected from corrosion, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

(1) The tank is constructed of fiberglass-reinforced plastic; or
Note: The following industry codes may be used to comply with paragraph (a)(1) of this section: Underwriters Laboratories Standard 1316, Standard for Glass Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products; Underwriter's Laboratories of Canada CAN4-5615-M83, Standard for Reinforced Plastic Underground Tanks for Petroleum Products; or American Society of Testing and Materials Standard D4021-86, Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks.

(2) The tank is constructed of steel and cathodically protected in the following manner:
(i) The tank is coated with a suitable dielectric material;

(ii) Field-installed cathodic protection systems are designed by a corrosion expert;
(iii) Impressed current systems are designed to allow determination of current operating status as required in 280.31(c); and
(iv) Cathodic protection systems are operated and maintained in accordance with 280.31 or according to guidelines established by the implementing agency; or
Note: The following codes and standards may be used to comply with paragraph (a)(2) of this section:
(A) Steel Tank Institute Specification for S11-P3 System of External Corrosion Protection of Underground Steel Storage Tanks;

(B) Underwriters Laboratories Standard 1746, Corrosion Protection Systems for Underground Storage Tanks;

(C) Underwriters Laboratories of Canada CAN4-S603-M85, Standard for Flammable and Combustible Liquids, and CAN4-G03.1-M85, Standard for Galvanic Corrosion Protection Systems for Underground Tanks for Flammable and Combustible Liquids, and CAN4-S631-M24, Isolating Bushings for Steel Underground Tanks Protected with Coatings and Galvanic Systems; or
(D) National Association of Corrosion Engineers Standard RP-02-85, Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems, and Underwriters Laboratories Standard 58, Standard for Steel Underground Tanks for Flammable and Combustible Liquids.

(3) The tank is constructed of a steel-fiberglass-reinforced-plastic composite; or
Note: The following industry codes may be used to comply with paragraph (a)(3) of this section: Underwriters Laboratories Standard 1746, Corrosion Protection Systems for Underground Storage Tanks, or the Association for Composite Tanks ACT-100, Specification for Composite Tanks ACT-100, Underground Storage Tanks.

(4) The tank is constructed of metal without additional corrosion protection measures provided that:
(i) The tank is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life; and
(ii) Owners and operators maintain records that demonstrate compliance with the requirements of paragraphs (a)(4)(i) for the remaining life of the tank; or
(5) The tank construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than paragraphs (a)(1) through (4) of this section.

(b) Piping. The piping that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and protected from corrosion in accordance with a code of practice developed

by a nationally recognized association or independent testing laboratory as specified below:

(1) The piping is constructed of fiberglass-reinforced plastic; or
Note: The following codes and standards may be used to comply with paragraph (b)(1) of this section:

(A) Underwriters Laboratories Subject 971, UL Listed Non-Metal Pipe;
(B) Underwriters Laboratories Standard 567, Pipe Connectors for Flammable and Combustible and LP Gas;
(C) Underwriters Laboratories of Canada Guide ULC-107, Glass Fiber Reinforced Plastic Pipe and Fittings for Flammable Liquids; and
(D) Underwriters Laboratories of Canada Standard CAN 4-S633-M81, Flexible Underground Hose Connectors.

(2) The piping is constructed of steel and cathodically protected in the following manner:
(i) The piping is coated with a suitable dielectric material;

(ii) Field-installed cathodic protection systems are designed by a corrosion expert;
(iii) Impressed current systems are designed to allow determination of current operating status as required in 280.31(c); and
(iv) Cathodic protection systems are operated and maintained in accordance with 280.31 or guidelines established by the implementing agency; or
Note: The following codes and standards may be used to comply with paragraph (b)(2) of this section:

(A) National Fire Protection Association Standard 30, Flammable and Combustible Liquids Code;
(B) American Petroleum Institute Publication 1615, Installation of Underground Petroleum Storage Systems;
(C) American Petroleum Institute Publication 1637, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems; and
(D) National Association of Corrosion Engineers Standard RP-01-69, Control of External Corrosion on Submerged Metallic Piping Systems.
(3) The piping is constructed of metal without additional corrosion protection measures provided that:

(i) The piping is installed at a site that is determined by a corrosion expert to not be corrosive enough to cause it to have a release due to corrosion during its operating life; and
(ii) Owners and operators maintain records that demonstrate compliance with the requirements of paragraph (b)(3)(i) of this section for the remaining life of the piping; or
Note: National Fire Protection Association Standard 30, Flammable and Combustible Liquids Code; and National Association of Corrosion Engineers Standard RP-01-69, Control of External Corrosion on Submerged Metallic Piping Systems, may be used to comply with paragraph (b)(3) of this section.

(4) The piping construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in paragraphs (b)(1) through (3) of this section.

(c) Spill and overflow prevention equipment.
(1) Except as provided in paragraph (c)(2) of this section, to prevent spilling and overflowing associated with product transfer to the UST system, owners and operators must use the following spill and overflow prevention equipment:

(i) Spill prevention equipment that will prevent release of product to the environment when the transfer hose is detached from the fill pipe (for example, a spill catchment basin); and
(ii) Overflow prevention equipment that will:
(A) Automatically shut off flow into the tank when the tank is no more than 95 percent full; or
(B) Alert the transfer operator when the tank is no more than 90 percent full by restricting the flow into the tank or triggering a high-level alarm; or
(C) Restrict flow 30 minutes prior to overflowing, alert the operator with a high level alarm one minute before overflowing, or automatically shut off flow into the tank so that none of the fittings located on top of the tank are exposed to product due to overflowing.

(2) Owners and operators are not required to use the spill and overflow prevention equipment specified in paragraph (c)(1) of this section if:
(i) Alternative equipment is used that is determined by the implementing agency to be

Environmental Protection Agency

no less protective of human health and the environment than the equipment specified in paragraph (c)(1) (i) or (ii) of this section; or
(ii) The UST system is filled by transfers of no more than 25 gallons at one time.

(d) *Installation.* All tanks and piping must be properly installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and in accordance with the manufacturer's instructions.

Note: Tank and piping system installation practices and procedures described in the following codes may be used to comply with the requirements of paragraph (d) of this section:

- (i) American Petroleum Institute Publication 1615, Installation of Underground Petroleum Storage System; or
- (ii) Petroleum Equipment Institute Publication RP100, Recommended Practices for Installation of Underground Liquid Storage Systems; or

(iii) American National Standards Institute Standard B31.3, Petroleum Refinery Piping, and American National Standards Institute Standard B31.4 Liquid Petroleum Transportation Piping System.

(e) Certification of installation. All owners and operators must ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with paragraph (d) of this section by providing a certification of compliance on the UST modification form in accordance with 280.22.

- (1) The installer has been certified by the tank and piping manufacturers; or
- (2) The installer has been certified or licensed by the implementing agency; or
- (3) The installation has been inspected and certified by a registered professional engineer with education and experience in UST system installation; or
- (4) The installation has been inspected and approved by the implementing agency; or
- (5) All work listed in the manufacturer's installation checklists has been completed; or
- (6) The owner and operator have complied with another method for ensuring compliance with paragraph (d) of this section that is determined by the implementing agency to be no less protective of human health and the environment.

[53 FR 37194, Sept. 23, 1988, as amended at 56 FR 38344, Aug. 13, 1991]

280.21 Upgrading of existing UST systems.

(a) *Alternatives allowed.* Not later than December 22, 1998, all existing UST systems must comply with one of the following requirements:

- (1) New UST system performance standards under 280.20;
 - (2) The upgrading requirements in paragraphs (b) through (d) of this section; or
 - (3) Closure requirements under Subpart G of this part, including applicable requirements for corrective action under Subpart F.
- (b) *Tank upgrading requirements.* Steel tanks must be upgraded to meet one of the following requirements in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory:

- (1) *Interior lining.* A tank may be upgraded by interior lining if:
- (i) The lining is installed in accordance with the requirements of 280.33, and
- (ii) Within 10 years after lining, and every 5 years thereafter, the lined tank is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications.

(2) *Cathodic protection.* A tank may be upgraded by cathodic protection if the cathodic protection system meets the requirements of 280.20(a)(2) (ii), (iii), and (iv) and the integrity of the tank is ensured using one of the following methods:

- (i) The tank is internally inspected and assessed to ensure that the tank is structurally sound and free of corrosion holes prior to installing the cathodic protection system; or
- (ii) The tank has been installed for less than 10 years and is monitored monthly for releases in accordance with 280.43 (d) through (h); or
- (iii) The tank has been installed for less than 10 years and is assessed for corrosion holes by conducting two (2) tightness tests that meet the requirements of 280.43(c). The first tightness test must be conducted prior to installing the cathodic protection system. The second tightness test must be conducted between three

(3) and six (6) months following the first operation of the cathodic protection system; or
(iv) The tank is assessed for corrosion holes by a method that is determined by the implementing agency to prevent releases in a manner that is no less protective of human health and the environment than paragraphs (b)(2) (i) through (iii) of this section.

(3) *Internal lining combined with cathodic protection.* A tank may be upgraded by both internal lining and cathodic protection if:

- (i) The lining is installed in accordance with the requirements of 280.33; and
- (ii) The cathodic protection system meets the requirements of 280.20(a)(2) (ii), (iii), and (iv).

Note: The following codes and standards may be used to comply with this section:

- (A) American Petroleum Institute Publication 1631, Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks;
- (B) National Leak Prevention Association Standard 631, Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection;
- (C) National Association of Corrosion Engineers Standard RP-02-85, Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems; and

(D) American Petroleum Institute Publication 1632, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems.

(c) Piping upgrading requirements. Metal piping that routinely contains regulated substances and is in contact with the ground must be cathodically protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and must meet the requirements of 280.20(b)(2) (ii), (iii), and (iv).

Note: The codes and standards listed in the note following 280.20(b)(2) may be used to comply with this requirement.

(d) Spill and overflow prevention equipment. To prevent spilling and overflowing associated with product transfer to the UST

system, all existing UST systems must comply with new UST system spill and overflow prevention equipment requirements specified in 280.20(c).

[53 FR 37194, Sept. 23, 1988]

280.22 Notification requirements.

(a) Any owner who brings an underground storage tank system into use after May 8, 1986, must within 30 days of bringing such tank into use, submit, in the form prescribed in Appendix I of this part, a notice of existence of such tank system to the state or local agency or department designated in Appendix II of this part to receive such notice.

Note: Owners and operators of UST systems that were in the ground on or after May 8, 1986, unless taken out of operation on or before January 1, 1974, were required to notify the designated state or local agency in accordance with the Hazardous and Solid Waste Amendments of 1984, Pub. L. 98-616, on a form published by EPA on November 8, 1985 (50 FR-46602) unless notice was given pursuant to section 103(c) of CERCLA. Owners and operators who have not complied with the notification requirements may use portions I through VI of the notification form contained in Appendix I of this part.

(b) In states where state law, regulations, or procedures require owners to use forms that differ from those set forth in Appendix I of this part to fulfill the requirements of this section, the state forms may be submitted in lieu of the forms set forth in Appendix I of this part. If a state requires that its form be used in lieu of the form presented in this regulation, such form must meet the requirements of section 9002.

(c) Owners required to submit notices under paragraph (a) of this section must provide notices to the appropriate agencies or departments identified in Appendix II of this part for each tank they own. Owners may provide notice for several tanks using one notification form, but owners who own tanks located at more than one place of operation must file a separate notification form for each separate place of operation.

(d) Notices required to be submitted under paragraph (a) of this section must provide all of the information in sections I through VI of the prescribed form (or appropriate state form) for each tank for which notice must be given. Notices for tanks installed after December 22, 1988 must also provide all of the information in

Environmental Protection Agency

280.34

section VII of the prescribed form (or appropriate state form) for each tank for which notice must be given.

(c) All owners and operators of new UST systems must certify in the notification form compliance with the following requirements:
(1) Installation of tanks and piping under 280.20(c);

(2) Cathodic protection of steel tanks and piping under 280.20 (a) and (b);

(3) Financial responsibility under Subpart H of this part; and

(4) Release detection under 280.41 and 280.42.

(f) All owners and operators of new UST systems must ensure that the installer certifies in the notification form that the methods used to install the tanks and piping complies with the requirements in 280.20(d).

(g) Beginning October 24, 1988, any person who sells a tank intended to be used as an underground storage tank must notify the purchaser of such tank of the owner's notification obligations under paragraph (a) of this section. The form provided in Appendix III of this part may be used to comply with this requirement.

[53 FR 37194, Sept. 23, 1988]

Subpart C—General Operating Requirements.

280.30 Spill and overflow control.

(a) Owners and operators must ensure that releases due to spilling or overfilling do not occur. The owner and operator must ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

Note: The transfer procedures described in National Fire Protection Association Publication 385 may be used to comply with paragraph (a) of this section. Further guidance on spill and overflow prevention appears in American Petroleum Institute Publication 1621, Recommended Practice for Bulk Liquid Stock Control at Retail Outlets, and National Fire Protection Association Standard 30, Flammable and Combustible Liquids Code.

(b) The owner and operator must report, investigate, and clean up any spills and overfills in accordance with 280.53.

[53 FR 37194, Sept. 23, 1988]

280.31 Operation and maintenance of corrosion protection.

All owners and operators of steel UST systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented for as long as the UST system is used to store regulated substances:

(a) All corrosion protection systems must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain regulated substances and are in contact with the ground.
(b) All UST systems equipped with cathodic protection systems must be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:

(1) Frequency. All cathodic protection systems must be tested within 6 months of installation and at least every 3 years thereafter or according to another reasonable time frame established by the implementing agency, and
(2) Inspection criteria. The criteria that are used to determine that cathodic protection is adequate as required by this section must be in accordance with a code of practice developed by a nationally recognized association.

Note: National Association of Corrosion Engineers Standard RP-02-85, Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems, may be used to comply with paragraph (b)(2) of this section.

(c) UST systems with impressed current cathodic protection systems must also be inspected every 60 days to ensure the equipment is running properly.

(d) For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained (in accordance with 280.34) to demonstrate compliance with the performance standards in this section.

These records must provide the following:

(1) The results of the last three inspections required in paragraph (c) of this section; and

(2) The results of testing from the last two inspections required in paragraph (b) of this section.

[53 FR 37194, Sept. 23, 1988]

280.32 Compatibility.

Owners and operators must use an UST system made of or lined with materials that are compatible with the substance stored in the UST system.

Note: Owners and operators storing alcohol blends may use the following codes to comply with the requirements of this section:

(a) American Petroleum Institute Publication 1626, Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations; and
(b) American Petroleum Institute

Publication 1627, Storage and Handling of Gasoline-Methanol/Cosolvent Blends at Distribution Terminals and Service Stations.

[53 FR 37194, Sept. 23, 1988]

280.33 Repairs allowed.

Owners and operators of UST systems must ensure that repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances. The repairs must meet the following requirements:

(a) Repairs to UST systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

Note: The following codes and standards may be used to comply with paragraph (a) of this section: National Fire Protection Association Standard 30, Flammable and Combustible Liquids Code; American Petroleum Institute Publication 2200, Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines; American Petroleum Institute Publication 1631, Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks; and National Leak Prevention Association Standard 631, Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection.

(b) Repairs to fiberglass-reinforced plastic tanks may be made by the manufacturer's authorized representatives or in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

(c) Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced. Fiberglass pipes and fittings may be repaired in accordance with the manufacturer's specifications.

(d) Repaired tanks and piping must be tightness tested in accordance with 280.43(c) and 280.44(b) within 30 days following the date of the completion of the repair except as provided in paragraphs (d) (1) through (3), of this section:

(1) The repaired tank is internally inspected in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory; or

(2) The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in 280.43 (d) through (h), or

(3) Another test method is used that is determined by the implementing agency to be no less protective of human health and the environment than those listed above.

(e) Within 6 months following the repair of any cathodically protected UST system, the cathodic protection system must be tested in accordance with 280.31 (b) and (c) to ensure that it is operating properly.

(f) UST system owners and operators must maintain records of each repair for the remaining operating life of the UST system that demonstrate compliance with the requirements of this section.

[53 FR 37194, Sept. 23, 1988]

280.34 Reporting and recordkeeping.

Owners and operators of UST systems must cooperate fully with inspections, monitoring and testing conducted by the implementing agency, as well as requests for document submission, testing, and monitoring by the owner or operator pursuant to section 9005 of Subtitle I of the Resource Conservation and Recovery Act, as amended.

Environmental Protection Agency

280.41

(a) *Reporting.* Owners and operators must submit the following information to the implementing agency:

- (1) Notification for all UST systems (280.22), which includes certification of installation for new UST systems (280.20(e)).
- (2) Reports of all releases including suspected releases (280.50), spills and overfills (280.53), and confirmed releases (280.61);
- (3) Corrective actions planned or taken including initial abatement measures (280.62), initial site characterization (280.63), free product removal (Sec. 280.64), investigation of soil and ground-water cleanup (280.65), and corrective action plan (280.66); and
- (4) A notification before permanent closure or change-in-service (280.71).

(b) *Recordkeeping.* Owners and operators must maintain the following information:

- (1) A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used (280.20(a)(4); 280.20(b)(3)).
- (2) Documentation of operation of corrosion protection equipment (280.31);
- (3) Documentation of UST system repairs (280.33(f));
- (4) Recent compliance with release detection requirements (280.45); and
- (5) Results of the site investigation conducted at permanent closure (280.74).

(c) *Availability and Maintenance of Records.* Owners and operators must keep the records required either:

- (1) At the UST site and immediately available for inspection by the implementing agency; or
- (2) At a readily available alternative site and be provided for inspection to the implementing agency upon request.

(3) In the case of permanent closure records required under 280.74, owners and operators

are also provided with the additional alternative of mailing closure records to the implementing agency if they cannot be kept at the site or an alternative site as indicated above.

Note: The recordkeeping and reporting requirements in this section have been approved by the Office of Management and Budget and have been assigned OMB Control No. 2050-0068.

[53 FR 37194, Sept. 23, 1988]

Subpart D Release Detection

280.40 General requirements for all UST systems.

(a) Owners and operators of new and existing UST systems must provide a method, or combination of methods, of release detection that:

- (1) Can detect a release from any portion of the tank and the connected underground piping that routinely contains product;
- (2) Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition; and
- (3) Meets the performance requirements in §280.43 or 280.44, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, methods used after the date shown in the following table corresponding with the specified method except for methods permanently installed prior to that date, must be capable of detecting the leak rate or quantity specified for that method in the corresponding section of the rule (also shown in the table) with a probability detection (Pd) of 0.95 and a probability of false alarm (Pfa) of 0.05.

(b) When a release detection method operated in accordance with the performance standards in 280.43 and 280.44 indicates a release may have occurred, owners and operators must notify the implementing agency in accordance with Subpart E.

(c) Owners and operators of all UST systems must comply with the release detection requirements of this subpart by December 22 of the year listed in the following table:

SCHEDULE FOR PHASE-IN OF RELEASE DETECTION

Year system was installed	Year when release detection is required (by December 22 of the year indicated)			
	1989	1990	1991	1992
Before 1965 or date unknown	RD			
1965-69		P		
1970-74		P/RD		
1975-79		P	RD	
1980-88		P	P	RD
New tanks (after December 22) immediately upon installation.				RD

P = Must begin release detection for all pressurized piping as defined 280.41(b)(1).
RD = Must begin release detection for tanks and suction piping in accordance with 280.41(e)

(d) Any existing UST system that cannot apply a method of release detection that complies with the requirements of this subpart must complete the closure procedures in Subpart G by the date on which release detection is required for that UST system under paragraph (c) of this section.

[53 FR 37194, Sept. 23, 1988, as amended at 55 FR 17753, April 27, 1990; 55 FR 23738, June 12, 1990; 56 FR 26, Jan. 2, 1991]

280.41 Requirements for petroleum UST systems.

Owners and operators of petroleum UST systems must provide release detection for tanks and piping as follows:

- (1) UST systems that meet the performance standards in 280.20 or 280.21, and the monthly inventory control requirements in 280.43 (a) or (b), may use tank tightness testing [conducted in accordance with 280.43(c)] at least every 5 years until December 22, 1998, or until 10 years after the tank is installed or upgraded under 280.21(b), whichever is later;
- (2) UST systems that do not meet the performance standards in 280.20 or 280.21 may use monthly inventory controls [conducted in accordance with 280.43(a) or (b)] and annual tank tightness testing [conducted in accordance

Environmental Protection Agency

with 280.43(c) until December 22, 1998 when the tank must be upgraded under 280.21 or permanently closed under 280.71; and

(3) Tanks with capacity of 550 gallons or less may use weekly tank gauging [conducted in accordance with 280.43(b)].

(b) Piping. Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:

(1) Pressurized piping. Underground piping that conveys regulated substances under pressure must:

(i) Be equipped with an automatic line leak detector conducted in accordance with 280.44(a); and

(ii) Have an annual line tightness test conducted in accordance with 280.44(b) or have monthly monitoring conducted in accordance with 280.44(c).

(2) Suction piping. Underground piping that conveys regulated substances under suction must either have a line tightness test conducted at least every 3 years and in accordance with 280.44(b), or use a monthly monitoring method conduct in accordance with 280.44(c). No release detection is required for suction piping that is designed and constructed to meet the following standards:

(i) The below-grade piping operates at less than atmospheric pressure;

(ii) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;

(iii) Only one check valve is included in each suction line;

(iv) The check valve is located directly below and as close as practical to the suction pump; and

(v) A method is provided that allows compliance with paragraphs (b)(2) (ii)-(iv) of this section to be readily determined.

[53 FR 37194, Sept. 23, 1988]

280.42 Requirements for hazardous substance UST systems.

Owners and operators of hazardous substance UST systems must provide release detection that meets the following requirements:

(a) Release detection at existing UST petroleum UST systems in 280.41. By December 22, 1998, all existing hazardous substance UST systems must meet the release detection requirements for new systems in paragraph (b) of this section.

(b) Release detection at new hazardous substance UST systems must meet the following requirements:

(1) Secondary containment systems must be designed, constructed, and installed to:

(i) Contain regulated substances released from the tank system until they are detected and removed;

(ii) Prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and

(iii) Be checked for evidence of a release at least every 30 days.

Note: The provisions of 40 CFR 265.193, Containment and Detection of Releases, may be used to comply with these requirements.

(2) Double-walled tanks must be designed, constructed, and installed to:

(i) Contain a release from any portion of the inner tank within the outer wall; and

(ii) Detect the failure of the inner wall.

(3) External liners (including vaults) must be designed, constructed, and installed to:

(i) Contain 100 percent of the capacity of the largest tank within its boundary;

(ii) Prevent the interference of precipitation or ground-water intrusion with the ability to contain or detect a release of regulated substances; and

(iii) Surround the tank completely (i.e., it is capable of preventing lateral as well as vertical migration of regulated substances).

(4) Underground piping must be equipped with secondary containment that satisfies the requirements of paragraph (b)(1) of this section (e.g., trench liners, jacking of double-walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with 280.44(a).

(5) Other methods of release detection may be used by owners and operators:

(i) Demonstrate to the implementing agency that an alternate method can detect a release of

the stored substance as effectively as any of the methods allowed in 280.43(b) through (h) can detect a release of petroleum;

(ii) Provide information to the implementing agency on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the UST site; and

(iii) Obtain approval from the implementing agency to use the alternate release detection method before the installation and operation of the new UST system.

[53 FR 37194, Sept. 23, 1988]

280.43 Methods of release detection for tanks.

Each method of release detection for tanks used to meet the requirements of 280.41 must be conducted in accordance with the following:

(a) Inventory control. Product inventory control (or another test of equivalent performance) must be conducted monthly to detect a release of at least 1.0 percent of flow-through plus 130 gallons on a monthly basis in the following manner:

(1) Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day;

(2) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

(3) The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;

(4) Deliveries are made through a drop tube that extends to within one foot of the tank bottom;

(5) Product dispensing is metered and recorded within the local standards for meter calibration or an accuracy of 6 cubic inches for every 5 gallons of product withdrawn; and

(6) The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month.

Note: Practices described in the American Petroleum Institute Publication 1621, Recommended Practice for Bulk Liquid Stock Control at Retail Outlets, may be used.

where applicable, as guidance in meeting the requirements of this paragraph.

(b) Manual tank gauging. Manual tank gauging must meet the following requirements:

(1) Tank liquid level measurements are taken at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;

(2) Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period;

(3) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

(4) A leak is suspected and subject to the requirements of Subpart E if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal tank capacity	Weekly standard (one test)	Monthly standard (average of four tests)
550 gallons or less	10 gallons	5 gallons
551-1,000 gallons	13 gallons	7 gallons
1,001-2,000 gallons	26 gallons	13 gallons

(5) Only tanks of 550 gallons or less nominal capacity may use this as the sole method of release detection. Tanks of 551 to 2,000 gallons may use the method in place of manual inventory control in 280.43(a). Tanks of greater than 2,000 gallons nominal capacity may not use this method to meet the requirements of this subpart.

(c) Tank tightness testing. Tank tightness testing (or another test of equivalent performance) must be capable of detecting a 0.1 gallon per hour leak rate from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

Environmental Protection Agency

(d) *Automatic tank gauging.* Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control must meet the following requirements:

(1) The automatic product level monitor test can detect a 0.2 gallon per hour leak rate from any portion of the tank that routinely contains product; and
(2) Inventory control (or another test of equivalent performance) is conducted in accordance with the requirements of 280.43(a).
(c) *Vapor monitoring.* Testing or monitoring for vapors within the soil gas of the excavation zone must meet the following requirements:

(1) The materials used as backfill are sufficiently porous (e.g., gravel, sand, crushed rock) to readily allow diffusion of vapors from releases into the excavation area;

(2) The stored regulated substance, or a tracer compound placed in the tank system, is sufficiently volatile (e.g., gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank;

(3) The measurement of vapors by the monitoring device is not rendered inoperative by the ground water, rainfall, or soil moisture or other known interferences so that a release could go undetected for more than 30 days;

(4) The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the tank;

(5) The vapor monitors are designed and operated to detect any significant increase in regulated substance stored in the tank system, a component or components of that substance, or a tracer compound placed in the tank system;

(6) In the UST excavation zone, the site is assessed to ensure compliance with the requirements in paragraphs (c) (1) through (4) of this section and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the tank that routinely contains product; and

(7) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(f) *Ground-water monitoring.* Testing or monitoring for liquids on the ground water must meet the following requirements:

(1) The regulated substance stored is immiscible in water and has a specific gravity of less than one;

(2) Ground water is never more than 20 feet from the ground surface and the hydraulic conductivity of the soil(s) between the UST system and the monitoring wells or devices is not less than 0.01 cm/sec (e.g., the soil should consist of gravels, coarse to medium sands, coarse silts or other permeable materials);

(3) The slotted portion of the monitoring well casing must be designed to prevent migration of natural soils or filler pack into the well and to allow entry of regulated substance on the water table into the well under both high and low ground-water conditions;

(4) Monitoring wells shall be sealed from the ground surface to the top of the filter pack;

(5) Monitoring wells or devices intercept the excavation zone or are as close to it as is technically feasible;

(6) The continuous monitoring devices or manual methods used can detect the presence of at least one-eighth of an inch of free product on top of the ground water in the monitoring wells;

(7) Within and immediately below the UST system excavation zone, the site is assessed to ensure compliance with the requirements in paragraphs (f) (1) through (5) of this section and to establish the number and positioning of monitoring wells or devices that will detect releases from any portion of the tank that routinely contains product; and

(8) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(g) *Interstitial monitoring.* Interstitial secondary methods used in the UST system and a barrier immediately around or beneath it may be used, but only if the system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains product, and also meets one of the following requirements:

(1) For double-walled UST systems, the sampling or testing method can detect a release through the inner wall in any portion of the tank that routinely contains product;

Note: The provisions outlined in the Steel Tank Institute's Standard for Dual Wall Underground Storage Tanks may be used as guidance for aspects of the design and construction of underground steel double-walled tanks.

(2) For UST systems with a secondary barrier within the excavation zone, the sampling or testing method used can detect a release between the UST system and the secondary barrier;

(i) The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (at least 10⁻⁶ cm/sec for the regulated substance stored) to direct a release to the monitoring point and permit its detection;

(ii) The barrier is compatible with the regulated substance stored so that a release from the UST system will not cause a deterioration of the barrier allowing a release to pass through undetected;

(iii) For cathodically protected tanks, the secondary barrier must be installed so that it does not interfere with the proper operation of the cathodic protection system;

(iv) The ground water, soil moisture, or rainfall will not render the testing or sampling method used inoperative so that a release could go undetected for more than 30 days;

(v) The site is assessed to ensure that the secondary barrier is always above the ground water and not in a 25-year flood plain, unless the barrier and monitoring designs are for use under such conditions; and

(vi) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(3) For tanks with an internally fitted liner, an automated device can detect a release between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.

(h) *Other methods.* Any other type of release detection method, or combination of methods, can be used if:

(1) It can detect a 0.2 gallon per hour leak rate or a release of 150 gallons within a month with a probability of detection of 0.95 and a probability of false alarm of 0.05; or

(2) The implementing agency may approve another method if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in paragraphs (c) through (h) of this section. In comparing methods, the implementing agency shall consider the size of release that the method can detect and the frequency and

reliability with which it can be detected. If the method is approved, the owner and operator must comply with any conditions imposed by the implementing agency on its use to ensure the protection of human health and the environment.

[53 FR 37194, Sept. 23, 1988]

280.44 Methods of release detection for piping.

Each method of release detection for piping used to meet the requirements of 280.41 must be conducted in accordance with the following:

(a) *Automatic line leak detectors.* Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping or triggering an audible or visual alarm may be used only if they detect leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour. An annual test of the operation of the leak detector must be conducted in accordance with the manufacturer's requirements.

(b) *Line tightness testing.* A periodic test of piping may be conducted only if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.

(c) *Applicable tank methods.* Any of the methods in 280.43 (e) through (h) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

[53 FR 37194, Sept. 23, 1988]

280.45 Release detection recordkeeping.

All UST system owners and operators must maintain records in accordance with 280.34 demonstrating compliance with all applicable requirements of this Subpart. These records must include the following:

(a) All written performance claims pertaining to any release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, must be maintained for 5 years, or for another reasonable period of time determined by the implementing agency, from the date of installation;

Environmental Protection Agency

280.61

(b) The results of any sampling, testing, or monitoring must be maintained for at least 1 year, or for another reasonable period of time determined by the implementing agency, except that the results of tank tightness testing conducted in accordance with 280.43(c) must be retained until the next test is conducted; and

(c) Written documentation of all calibration, maintenance, and repair of release detection equipment permanently located on-site must be maintained for at least one year after the servicing work is completed, or for another reasonable time period determined by the implementing agency. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained for 5 years from the date of installation.

[53 FR 37194, Sept. 23, 1988]

Subpart E—Release Reporting, Investigation, and Confirmation

280.50 Reporting of suspected releases.

Owners and operators of UST systems must report to the implementing agency within 24 hours, or another reasonable time period specified by the implementing agency, and follow the procedures in 280.52 for any of the following conditions:

(a) The discovery by owners and operators or others of released regulated substances at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water).

(b) Unusual operating conditions observed by owners and operators (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, or an unexplained presence of water in the tank), unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced; and

(c) Monitoring results from a release detection method required under 280.41 and 280.42 that indicate a release may have occurred unless:

(1) The monitoring device is found to be defective, and is immediately repaired, recalibrated, or replaced, and additional monitoring does not confirm the initial result; or

(2) In the case of inventory control, a second month of data does not confirm the initial result.

[53 FR 37194, Sept. 23, 1988]

280.51 Investigation due to off-site impacts.

When required by the implementing agency, owners and operators of UST systems must follow the procedures in 280.52 to determine if the UST system is the source of off-site impacts. These impacts include the discovery of regulated substances (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface and drinking waters) that has been observed by the implementing agency or brought to its attention by another party.

[53 FR 37194, Sept. 23, 1988]

280.52 Release investigation and confirmation steps.

Unless corrective action is initiated in accordance with Subpart F, owners and operators must immediately investigate and confirm all suspected releases of regulated substances requiring reporting under 280.50 within 7 days, or another reasonable time period specified by the implementing agency, using either the following steps or another procedure approved by the implementing agency:

(a) *System test.* Owners and operators must conduct tests (according to the requirements for tightness testing in 280.43(c) and 280.44(b)) that determine whether a leak exists in that portion of the tank that routinely contains product, or the attached delivery piping, or both.

(1) Owners and operators must repair, replace or upgrade the UST system, and begin corrective action in accordance with Subpart F if the test results for the system, tank, or delivery piping indicate that a leak exists.

(2) Further investigation is not required if the test results for the system, tank, and delivery piping do not indicate that a leak exists and if

environmental contamination is not the basis for suspecting a release.

(3) Owners and operators must conduct a site check as described in paragraph (b) of this section if the test results for the system, tank, and delivery piping do not indicate that a leak exists but environmental contamination is the basis for suspecting a release.

(b) *Site check.* Owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill, the depth of ground water, and other factors appropriate for identifying the presence and source of the release.

(1) If the test results for the excavation zone or the UST site indicate that a release has occurred, owners and operators must begin corrective action in accordance with Subpart F;

(2) If the test results for the excavation zone or the UST site do not indicate that a release has occurred, further investigation is not required.

[53 FR 37194, Sept. 23, 1988]

280.53 Reporting and cleanup of spills and overfills.

(a) Owners and operators of UST systems must contain and immediately clean up a spill or overflow and report to the implementing agency within 24 hours, or another reasonable time period specified by the implementing agency, and begin corrective action in accordance with Subpart F in the following cases:

(1) Spill or overflow of petroleum that results in a release to the environment that exceeds 25 gallons or another reasonable amount specified by the implementing agency, or that causes a sheen on nearby surface water; and

(2) Spill or overflow of a hazardous substance that results in a release to the environment that equals or exceeds its reportable quantity under CERCLA (40 CFR Part 302).

(b) Owners and operators of UST systems must contain and immediately clean up a spill or overflow of petroleum that is less than 25 gallons or another reasonable amount specified

by the implementing agency, and a spill or overflow of a hazardous substance that is less than the reportable quantity. If cleanup cannot be accomplished within 24 hours, or another reasonable time period established by the implementing agency, owners and operators must immediately notify the implementing agency.

Note: Pursuant to 302.6 and 355.40, a release of a hazardous substance equal to or in excess of its reportable quantity must also be reported immediately (rather than within 24 hours) to the National Response Center under sections 102 and 103 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and to appropriate state and local authorities under Title III of the Superfund Amendments and Reauthorization Act of 1986.

[53 FR 37194, Sept. 23, 1988]

Subpart F—Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances

280.60 General.

Owners and operators of petroleum or hazardous substance UST systems must, in response to a confirmed release from the UST system, comply with the requirements of this subpart except for USTs excluded under 280.10(b) and UST systems subject to RCRA Subtitle C corrective action requirements under section 3004(u) of the Resource Conservation and Recovery Act, as amended.

[53 FR 37194, Sept. 23, 1988]

280.61 Initial response.

Upon confirmation of a release in accordance with 280.52 or after a release from the UST system is identified in any other manner, owners and operators must perform the following initial response actions within 24 hours of a release or within another reasonable period of time determined by the implementing agency:

(a) Report the release to the implementing agency (e.g., by telephone or electronic mail);

(b) Take immediate action to prevent any further release of the regulated substance into the environment; and

Environmental Protection Agency

280.66

(c) Identify and mitigate fire, explosion, and vapor hazards.

[53 FR 37194, Sept. 23, 1988]

280.62 Initial abatement measures and site check.

(a) Unless directed to do otherwise by the implementing agency, owners and operators must perform the following abatement measures:

(1) Remove as much of the regulated substance from the UST system as is necessary to prevent further release to the environment;

(2) Visually inspect any aboveground releases or exposed belowground releases and prevent further migration of the released substance into surrounding soils and ground water;

(3) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements);

(4) Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. If these remedies include treatment or disposal of soils, the owner and operator must comply with applicable State and local requirements;

(5) Measure for the presence of a release where contamination is most likely to be present at the UST site, unless the presence and source of the release have been confirmed in accordance with the site check required by 280.52(b) or the closure site assessment of 280.72(a). In selecting sample types, sample locations, and measurement methods, the owner and operator must consider the nature of the stored substance, the type of backfill, depth to ground water and other factors as appropriate for identifying the presence and source of the release; and

(6) Investigate to determine the possible presence of free product, and begin free product removal as soon as practicable and in accordance with 280.64.

(b) Within 20 days after release confirmation, or within another reasonable period of time determined by the implementing

agency, owners and operators must submit a report to the implementing agency summarizing the initial abatement steps taken under paragraph (a) of this section and any resulting information or data.

[53 FR 37194, Sept. 23, 1988]

280.63 Initial site characterization.

(a) Unless directed to do otherwise by the implementing agency, owners and operators must assemble information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in 280.60 and 280.61.

This information must include, but is not necessarily limited to the following:

(1) Data on the nature and estimated quantity of release;

(2) Data from available sources and/or site investigations concerning the following factors: surrounding populations, water quality, use and approximate locations of wells potentially affected by the release, subsurface soil conditions, locations of subsurface sewers, climatological conditions, and land use;

(3) Results of the site check required under 280.62(a)(5); and

(4) Results of the free product investigations required under 280.62(a)(6), to be used by owners and operators to determine whether free product must be recovered under 280.64.

(b) Within 45 days of release confirmation or another reasonable period of time determined by the implementing agency, owners and operators must submit the information collected in compliance with paragraph (a) of this section to the implementing agency in a manner that demonstrates its applicability and technical adequacy, or in a format and according to the schedule required by the implementing agency.

[53 FR 37194, Sept. 23, 1988]

280.64 Free product removal.

At sites where investigations under 280.62(a)(6) indicate the presence of free product, owners and operators must remove free product to the maximum extent practicable as determined by the implementing agency while continuing, as necessary, any actions

initiated under 280.61 through 280.63, or preparing for actions required under 280.65 through 280.66. In meeting the requirements of this section, owners and operators must:

(a) Conduct free product removal in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery byproducts in compliance with applicable local, State, and Federal regulations;

(b) Use abatement of free product migration as a minimum objective for the design of the free product removal system;

(c) Handle any flammable products in a safe and competent manner to prevent fires or explosions; and

(d) Unless directed to do otherwise by the implementing agency, prepare and submit to the implementing agency, within 45 days after confirming a release, a free product removal report that provides at least the following information:

(1) The name of the person(s) responsible for implementing the free product removal measures;

(2) The estimated quantity, type, and thickness of free product observed or measured in wells, boreholes, and excavations;

(3) The type of free product recovery system used;

(4) Whether any discharge will take place on-site or off-site during the recovery operation and where this discharge will be located;

(5) The type of treatment applied to, and the effluent quality expected from, any discharge;

(6) The steps that have been or are being taken to obtain necessary permits for any discharge; and

(7) The disposition of the recovered free product.

[53 FR 37194, Sept. 23, 1988]

280.65 Investigations for soil and ground-water cleanup.

(a) In order to determine the full extent and location of soils contaminated by the release and the presence and concentrations of dissolved product contamination in the ground

water, owners and operators must conduct investigations of the release, the release site, and the surrounding area possibly affected by the release if any of the following conditions exist:

(1) There is evidence that ground-water wells have been affected by the release (e.g., as found during release confirmation or previous corrective action measures);

(2) Free product is found to need recovery in compliance with 280.64;

(3) There is evidence that contaminated soils may be in contact with ground water (e.g., as found during conduct of the initial response measures or investigations required under 280.60 through 280.64); and

(4) The implementing agency requests an investigation, based on the potential effects of contaminated soil or ground water on nearby surface water and ground-water resources.

(b) Owners and operators must submit the information collected under paragraph (a) of this section as soon as practicable or in accordance with a schedule established by the implementing agency.

[53 FR 37194, Sept. 23, 1988]

280.66 Corrective action plan.

(a) At any point after reviewing the information submitted in compliance with 280.61 through 280.63, the implementing agency may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and ground water. If a plan is required, owners and operators must submit the plan according to a schedule and format established by the implementing agency. Alternatively, owners and operators may, after fulfilling the requirements of 280.61 through 280.63, choose to submit a corrective action plan for responding to contaminated soil and ground water. In either case, owners and operators are responsible for submitting a plan that provides for adequate protection of human health and the environment as determined by the implementing agency, and must modify their plan as necessary to meet this standard.

(b) The implementing agency will approve the corrective action plan only after ensuring that implementation of the plan will adequately

Environmental Protection Agency

protect human health, safety, and the environment. In making this determination, the implementing agency should consider the following factors as appropriate:

- (1) The physical and chemical characteristics of the regulated substance, including its toxicity, persistence, and potential for migration;
- (2) The hydrologic characteristics of the facility and the surrounding area;
- (3) The proximity, quality, and current and future uses of nearby surface water and ground water;

(4) The potential effects of residual contamination on nearby surface water and ground water;

(5) An exposure assessment; and

(6) Any information assembled in compliance with this subpart.

(c) Upon approval of the corrective action plan or as directed by the implementing agency, owners and operators must implement the plan, including modifications to the plan made by the implementing agency. They must monitor, evaluate, and report the results of implementing the plan in accordance with a schedule and in a format established by the implementing agency.

(d) Owners and operators may, in the interest of minimizing environmental contamination and promoting more effective cleanup, begin cleanup of soil and ground water before the corrective action plan is approved provided that they:

- (1) Notify the implementing agency of their intention to begin cleanup;
- (2) Comply with any conditions imposed by the implementing agency, including halting cleanup or mitigating adverse consequences from cleanup activities; and
- (3) Incorporate these self-initiated cleanup measures in the corrective action plan that is submitted to the implementing agency for approval.

[53 FR 37194, Sept. 23, 1988]

280.67 Public participation.

(a) For each confirmed release that requires a corrective action plan, the implementing agency must provide notice to the public by means designed to reach those members of the public directly affected by the release and the

planned corrective action. This notice may include, but is not limited to, public notice in local newspapers, block advertisements, public service announcements, publication in a state register, letters to individual households, or personal contacts by field staff.

(b) The implementing agency must ensure that site release information and decisions concerning the corrective action plan are made available to the public for inspection upon request.

(c) Before approving a corrective action plan, the implementing agency may hold a public meeting to consider comments on the proposed corrective action plan if there is sufficient public interest, or for any other reason.

(d) The implementing agency must give public notice that complies with paragraph (a) of this section if implementation of an approved corrective action plan does not achieve the established cleanup levels in the plan and termination of that plan is under consideration by the implementing agency.

[53 FR 37194, Sept. 23, 1988]

Subpart G—Out-of-Service UST Systems and Closure

280.70 Temporary closure.

(a) When an UST system is temporarily closed, owners and operators must continue operation and maintenance of corrosion protection in accordance with 280.31, and any release detection in accordance with Subpart D. Subparts E and F must be complied with if a release is suspected or confirmed. However, release detection is not required as long as the UST system is empty. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remain in the system.

(b) When an UST system is temporarily closed for 3 months or more, owners and operators must also comply with the following requirements:

- (1) Leave vent lines open and functioning; and

(2) Cap and secure all other lines, pumps, manways, and ancillary equipment.

(c) When an UST system is temporarily closed for more than 12 months, owners and operators must permanently close the UST system if it does not meet either performance standards in 280.20 for new UST systems or the upgrading requirements in 280.21, *except that* the spill and overflow equipment requirements do not have to be met. Owners and operators must permanently close the substandard UST systems at the end of this 12-month period in accordance with 280.71-280.74, *unless* the implementing agency provides an extension of the 12-month temporary closure period. Owners and operators must complete a site assessment in accordance with 280.72 before such an extension can be applied for.

[53 FR 37194, Sept. 23, 1988]

280.71 Permanent closure and changes-in-service.

(a) At least 30 days before beginning either permanent closure or a change-in-service under paragraphs (b) and (c) of this section, or within another reasonable time period determined by the implementing agency, owners and operators must notify the implementing agency of their intent to permanently close or make the change-in-service, *unless* such action is in response to corrective action. The required assessment of the excavation zone under 280.72 must be performed after notifying the implementing agency but before completion of the permanent closure or a change-in-service.

(b) To permanently close a tank, owners and operators must empty and clean it by removing all liquids and accumulated sludges. All tanks taken out of service permanently must also be either removed from the ground or filled with an inert solid material.

(c) Continued use of an UST system to store a non-regulated substance is considered a change-in-service. Before a change-in-service, owners and operators must empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance with 280.72.

Note: The following cleaning and closure procedures may be used to comply with this section:

(A) American Petroleum Institute Recommended Practice 1604, Removal and Disposal of Used Underground Petroleum Storage Tanks;

(B) American Petroleum Institute Publication 2015, Cleaning Petroleum Storage Tanks;

(C) American Petroleum Institute Recommended Practice 1631, Interior Lining of Underground Storage Tanks, may be used as guidance for compliance with this section; and

(D) The National Institute for Occupational Safety and Health Criteria for a Recommended Standard * * * Working in Confined Space may be used as guidance for conducting safe closure procedures at some hazardous substance tanks.

[53 FR 37194, Sept. 23, 1988]

280.72 Assessing the site at closure or change-in-service.

(a) Before permanent closure or a change-in-service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to ground water, and other factors appropriate for identifying the presence of a release. The requirements of this section are satisfied if one of the external release detection methods allowed in 280.43 (e) and (f) is operating in accordance with the requirements in 280.43 at the time of closure, and indicates no release has occurred.

(b) If contaminated soils, contaminated ground water, or free product as a liquid or vapor is discovered under paragraph (a) of this section, or by any other manner, owners and operators must begin corrective action in accordance with Subpart F.

[53 FR 37194, Sept. 23, 1988]

280.73 Applicability to previously closed UST systems.

When directed by the implementing agency, the owner and operator of an UST system permanently closed before December 22, 1988

Environmental Protection Agency

must assess the excavation zone and close the UST system in accordance with this Subpart if releases from the UST may, in the judgment of the implementing agency, pose a current or potential threat to human health and the environment.
[53 FR 37194, Sept. 23, 1988]

280.74 Closure records.

Owners and operators must maintain records in accordance with 280.34 that are capable of demonstrating compliance with closure requirements under this Subpart. The results of the excavation zone assessment required in 280.72 must be maintained for at least 3 years after completion of permanent closure or change-in-service in one of the following ways:

- (a) By the owners and operators who took the UST system out of service;
- (b) By the current owners and operators of the UST system site; or
- (c) By mailing these records to the implementing agency if they cannot be maintained at the closed facility.

[Source: 53 FR 43370, Oct. 26, 1988, unless otherwise noted.]

Subpart H—Financial Responsibility

280.90 Applicability.

- (a) This subpart applies to owners and operators of all petroleum underground storage tank (UST) systems except as otherwise provided in this section.
- (b) Owners and operators of petroleum UST systems are subject to these requirements if they are in operation on or after the date for compliance established in 280.91.
- (c) State and Federal government entities whose debts and liabilities are the debts and

liabilities of a state or the United States are exempt from the requirements of this subpart.
(d) The requirements of this subpart do not apply to owners and operators of any UST system described in 280.10 (b) or (c).

(e) If the owner and operator of a petroleum underground storage tank are separate persons, only one person is required to demonstrate financial responsibility; however, both parties are liable in event of noncompliance. Regardless of which party complies, the date set for compliance at a particular facility is determined by the characteristics of the owner as set forth in 280.91.

[53 FR 43370, Oct. 26, 1988]

280.91 Compliance dates.

Owners of petroleum underground storage tanks are required to comply with the requirements of this subpart by the following dates:

- (a) All petroleum marketing firms owning 1,000 or more USTs and all other UST owners that report a tangible net worth of \$20 million or more to the U.S. Securities and Exchange Commission (SEC), Dun and Bradstreet, the Energy Information Administration, or the Rural Electrification Administration; January 24, 1989, except that compliance with 280.94(b) is required by: July 24, 1989.
- (b) All petroleum marketing firms owning 100-999 USTs; October 26, 1989.
- (c) All petroleum marketing firms owning 13-99 USTs at more than one facility; April 26, 1991.
- (d) All petroleum UST owners not described in paragraphs (a), (b), or (c) of this section, excluding local government entities; December 31, 1993.

(e) All local government entities (including Indian tribes) not included in paragraph (f) of this section; February 18, 1994.

(f) Indian tribes that own USTs on Indian lands which meet the applicable technical requirements of this part; December 31, 1998.

[53 FR 43370, Oct. 26, 1988, as amended at 54 FR 5452, Feb. 3, 1989; 55 FR 18567, May 2, 1990; 55 FR 46025, Oct. 31, 1990; 56 FR 66373, Dec. 23, 1991; 59 FR 9607, Feb. 28, 1994]

280.92 Definition of terms.

When used in this subpart, the following terms shall have the meanings given below:

"Accidental release" means any sudden or nonsudden release of petroleum from an underground storage tank that results in a need for corrective action and/or compensation for bodily injury or property damage neither expected nor intended by the tank owner or operator.

"Bodily injury" shall have the meaning given to this term by applicable state law; however, this term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for bodily injury.

"Chief Financial Officer," in the case of local government owners and operators, means the individual with the overall authority and responsibility for the collection, disbursement, and use of funds by the local government.

"Controlling interest" means direct ownership of at least 50 percent of the voting stock of another entity.

"Director of the Implementing Agency" means the EPA Regional Administrator, or, in the case of a state with a program approved under section 9004, the Director of the designated state or local agency responsible for carrying out an approved UST program.

"Financial reporting year" means the latest consecutive twelve-month period for which any of the following reports used to support a financial test is prepared:

- (1) a 10-K report submitted to the SEC;

(2) an annual report of tangible net worth submitted to Dun and Bradstreet; or

(3) annual reports submitted to the Energy Information Administration or the Rural Electrification Administration. "Financial reporting year" may thus comprise a fiscal or a calendar year period.

"Legal defense cost" is any expense that an owner or operator or provider of financial assurance incurs in defending against claims or actions brought.

(1) By EPA or a state to require corrective action or to recover the costs of corrective action;

(2) By or on behalf of a third party for bodily injury or property damage caused by an accidental release; or

(3) By any person to enforce the terms of a financial assurance mechanism.

"Local government" shall have the meaning given this term by applicable state law and includes Indian tribes. The term is generally intended to include:

- (1) Counties, municipalities, townships, separately chartered and operated special districts (including local government public transit systems and redevelopment authorities), and independent school districts authorized as governmental bodies by state charter or constitution; and
- (2) Special districts and independent school districts established by counties, municipalities, townships, and other general purpose governments to provide essential services.

"Occurrence" means an accident, including continuous or repeated exposure to conditions, which results in a release from an underground storage tank.

Note: This definition is intended to assist in understanding of these regulations and is not intended either to limit the meaning of occurrence in a way that conflicts with standard insurance usage or to prevent the use of other standard insurance terms in place of occurrence.

2

1

Environmental Protection Agency

280.95

"Owner or operator," when the owner or operator are separate parties, refers to the party that is obtaining or has obtained financial assurances.

"Petroleum marketing facilities" include all facilities at which petroleum is produced or refined and all facilities from which petroleum is sold or transferred to other petroleum marketers or to the public.

"Petroleum marketing firms" are all firms owning petroleum marketing facilities. Firms owning other types of facilities with USTs as well as petroleum marketing facilities are considered to be petroleum marketing firms.

"Property damage" shall have the meaning given this term by applicable state law. This term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for property damage. However, such exclusions for property damage shall not include corrective action associated with releases from tanks which are covered by the policy.

"Provider of financial assurance" means an entity that provides financial assurance to an owner or operator of an underground storage tank through one of the mechanisms listed in 280.95-280.103, including a guarantor, insurer, risk retention group, surety, issuer of a letter of credit, issuer of a state-required mechanism, or a state.

"Substantial business relationship" means the extent of a business relationship necessary under applicable state law to make a guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued incident to that relationship if it arises from and depends on existing economic transactions between the guarantor and the owner or operator.

"Substantial governmental relationship" means the extent of a governmental relationship necessary under applicable state law to make an added guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from a clear commonality of interest in the event of an UST release such as continuous boundaries, overlapping constituencies, common ground-water aquifer, or other relationship other than monetary

compensation that provides a motivation for the guarantor to provide a guarantee.

"Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets do not include intangibles such as goodwill and rights to patents or royalties. For purposes of this definition, assets means all existing and all probable future economic benefits obtained or controlled by a particular entity as a result of past transactions.

"Termination" under §280.97(b)(1) and §280.97(b)(2) means only those changes that could result in a gap in coverage as when the insured has not obtained substitute coverage or has obtained substitute coverage with a different retroactive date than the retroactive date of the original policy.

[53 FR 43370, Oct. 26, 1988, as amended at 54 FR 47081, Nov. 9, 1989; 58 FR 9050, Feb. 18, 1993]

280.93 Amount and scope of required financial responsibility.

(a) Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following per-occurrence amounts:

(1) For owners or operators of petroleum underground storage tanks that are located at petroleum marketing facilities, or that handle an average of more than 10,000 gallons of petroleum per month based on annual throughput for the previous calendar year, \$1 million.

(2) For all other owners or operators of petroleum underground storage tanks; \$500,000.

(b) Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following annual aggregate amounts:

(1) For owners or operators of 1 to 100 petroleum underground storage tanks, \$1 million; and

(2) For owners or operators of 101 or more petroleum underground storage tanks, \$2 million.

(c) For the purposes of paragraphs (b) and (f) of this section, only, a petroleum underground storage tank means a single containment unit and does not mean combinations of single containment units.

(d) Except as provided in paragraph (e) of this section, if the owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for:

(1) Taking corrective action;

(2) Compensating third parties for bodily injury and property damage caused by sudden accidental releases; or

(3) Compensating third parties for bodily injury and property damage caused by nonsudden accidental releases, the amount of assurance provided by each mechanism or combination of mechanisms must be in the full amount specified in paragraphs (a) and (b) of this section.

(e) If an owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for different petroleum underground storage tanks, the annual aggregate required shall be based on the number of tanks covered by each such separate mechanism or combination of mechanisms.

(f) Owners or operators shall review the amount of aggregate assurance provided whenever additional petroleum underground storage tanks are acquired or installed. If the number of petroleum underground storage tanks for which assurance must be provided exceeds 100, the owner or operator shall demonstrate financial responsibility in the amount of at least \$2 million of annual aggregate assurance by the anniversary of the date on which the mechanism demonstrating financial responsibility became effective. If assurance is being demonstrated by a combination of mechanisms, the owner or operator shall demonstrate financial responsibility in the amount of at least \$2 million of annual aggregate assurance by the first-occurring effective date anniversary of any

one of the mechanisms combined (other than a financial test or guarantee) to provide assurance.

(g) The amounts of assurance required under this section exclude legal defense costs.

(h) The required per-occurrence and annual aggregate coverage amounts do not in any way limit the liability of the owner or operator.

[53 FR 43370, Oct. 26, 1988]

280.94 Allowable mechanisms and combinations of mechanisms.

(a) Subject to the limitations of paragraphs (b) and (c) of this section,

(1) An owner or operator, including a local government owner or operator, may use any one or combination of the mechanisms listed in Secs. 280.95 through 280.103 to demonstrate financial responsibility under this subpart for one or more underground storage tanks, and

(2) A local government owner or operator may use any one or combination of the mechanisms listed in §§280.104 through 280.107 to demonstrate financial responsibility under this subpart for one or more underground storage tanks.

(b) An owner or operator may use a guarantee under Sec. 280.96 or surety bond under Sec. 280.98 to establish financial responsibility only if the Attorney(s) General of the state(s) in which the underground storage tanks are located has (have) submitted a written statement to the implementing agency that a guarantee or surety bond executed as described in this section is a legally valid and enforceable obligation in that state.

(c) An owner or operator may use self-insurance in combination with a guarantee only if, for the purpose of meeting the requirements of the financial test under this rule, the financial statements of the owner or operator are not consolidated with the financial statements of the guarantor.

[53 FR 43370, Oct. 26, 1988, as amended at 58 FR 9051, Feb. 18, 1993]

280.95 Financial test of self-insurance.

(a) An owner or operator, and/or guarantor, may satisfy the requirements of 280.93 by

Environmental Protection Agency

passing a financial test as specified in this section. To pass the financial test of self-insurance, the owner or operator, and/or guarantor must meet the criteria of paragraph (b) or (c) of this section based on year-end financial statements for the latest completed fiscal year.

(b)(1) The owner or operator, and/or guarantor, must have a tangible net worth of at least ten times:

(i) The total of the applicable aggregate amount required by 280.93, based on the number of underground storage tanks for which a financial test is used to demonstrate financial responsibility to EPA under this section or to a state implementing agency under a state program approved by EPA under 40 CFR Part 281;

(ii) The sum of the corrective action cost estimates, the current closure and post-closure care cost estimates, and amount of liability coverage for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR 264.101, 264.143, 264.145, 265.143, 165.145, 264.147, and 265.147 or to a state implementing agency under a state program authorized by EPA under 40 CFR Part 271; and

(iii) The sum of current plugging and abandonment cost estimates for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR 144.63 or to a state implementing agency under a state program authorized by EPA under 40 CFR Part 145.

(2) The owner or operator, and/or guarantor, must have a tangible net worth of at least \$10 million.

(3) The owner or operator, and/or guarantor, must have a letter signed by the chief financial officer worded as specified in paragraph (d) of this section.

(4) The owner or operator, and/or guarantor, must either:

(i) File financial statements annually with the U.S. Securities and Exchange Commission, the Energy Information Administration, or the Rural Electrification Administration; or

(ii) Report annually the firm's tangible net worth to Dun and Bradstreet, and Dun and Bradstreet must have assigned the firm a financial strength rating of 4A or 5A.

(5) The firm's year-end financial statements, if independently audited, cannot include an adverse auditor's opinion, a disclaimer of opinion, or a going concern qualification.

(c)(1) The owner or operator, and/or guarantor must meet the financial test requirements of 40 CFR 264.147(X1), substituting the appropriate amounts specified in Sec. 280.93 (b)(1) and (b)(2) for the amount of liability coverage each time specified in that section.

(2) The fiscal year-end financial statements of the owner or operator, and/or guarantor, must be examined by an independent certified public accountant and be accompanied by the accountant's report of the examination.

(3) The firm's year-end financial statements cannot include an adverse auditor's opinion, a disclaimer of opinion, or a going concern qualification.

(4) The owner or operator, and/or guarantor, must have a letter signed by the chief financial officer, worded as specified in paragraph (d) of this section.

(5) If the financial statements of the owner or operator, and/or guarantor, are not submitted annually to the U.S. Securities and Exchange Commission, the Energy Information Administration, or the Rural Electrification Administration, the owner or operator, and/or guarantor, must obtain a special report by an independent certified public accountant stating that:

(i) He has compared the data that the letter form the chief financial officer specifies as having been derived from the latest year-end financial statements of the owner or operator, and/or guarantor, with the amounts in such financial statements; and

(ii) In connection with that comparison, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(d) To demonstrate that it meets the financial test under paragraph (b) or (c) of this section, the chief financial officer of the owner or operator, or guarantor, must sign, within 120 days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as follows, except that the instructions

in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of the owner or operator, or guarantor]. This letter is in support of the use of [insert: the financial test of self-insurance, and/or guarantee] to demonstrate financial responsibility for [insert: taking corrective action and/or compensating third parties for bodily injury and property damage] caused by [insert: sudden accidental releases and/or nonsudden accidental releases] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test or a financial test under an authorized State program by this [insert: owner or operator, and/or guarantor]: [List for each facility: the name and address of the facility where tanks assured by this financial test are located, and whether tanks are assured by this financial test or a financial test under a State program approved under 40 CFR Part 281. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test or a financial test under a State program authorized under 40 CFR Part 281 by the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22 or the corresponding State requirements.]

A [insert: financial test, and/or guarantee] is also used by this [insert: owner or operator,

or guarantor] to demonstrate evidence of financial responsibility in the following amounts under other EPA regulations or state programs authorized by EPA under 40 CFR Parts 271 and 145:

EPA Regulations	Amount
Closure (264.143 and 265.143).....	\$ _____
Post-Closure Care (264.145 and 265.145)	\$ _____
Liability Coverage (264.147 and 265.147)	\$ _____
Corrective Action [264.101(b)].....	\$ _____
Plugging and Abandonment (144.63)	\$ _____
Closure	\$ _____
Post-Closure Care.....	\$ _____
Liability Coverage.....	\$ _____
Corrective Action	\$ _____
Plugging and Abandonment.....	\$ _____
Total.....	\$ _____

This [insert: owner or operator, or guarantor] has not received an adverse opinion, a disclaimer of opinion, or a going concern qualification from an independent auditor on his financial statements for the latest completed fiscal year.

[Fill in the information for Alternative I if the criteria of paragraph (b) of 280.95 are being used to demonstrate compliance with the financial test requirements. Fill in the information for Alternative II if the criteria of paragraph (c) of 280.95 are being used to demonstrate compliance with the financial test requirements.]

Environmental Protection Agency

280.96

Alternative I

- 1. Amount of annual UST aggregate coverage being assured by a financial test, and/or guarantee..... \$ _____
- 2. Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee..... \$ _____
- 3. Sum of lines 1 and 2..... \$ _____
- 4. Total tangible assets..... \$ _____
- 5. Total liabilities [if reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6]..... \$ _____
- 6. Tangible net worth [subtract line 5 from line 4]..... \$ _____
- 7. Is line 6 at least \$10 million?..... Yes No
- 8. Is line 6 at least 10 times line 3?.....
- 9. Have financial statements for the latest fiscal year been filed with the Securities and Exchange Commission?.....
- 10. Have financial statements for the latest fiscal year been filed with the Energy Information Administration?.....
- 11. Have financial statements for the latest fiscal year been filed with the Rural Electrification Administration?.....
- 12. Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating of 4A or 5A? [Answer "Yes" only if both criteria have been met.].....

Alternative II

- 1. Amount of annual UST aggregate coverage being assured by a test, and/or guarantee..... \$ _____
- 2. Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee..... \$ _____
- 3. Sum of lines 1 and 2..... \$ _____
- 4. Total tangible assets..... \$ _____
- 5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6]..... \$ _____
- 6. Tangible net worth [subtract line 5 from line 4]..... \$ _____
- 7. Total assets in the U.S. [required only if less than 90 percent of assets are located in the U.S.]..... \$ _____
- 8. Is line 6 at least \$10 million?.....
- 9. Is line 6 at least 6 times line 3?.....
- 10. Are at least 90 percent of assets located in the U.S.? [If "No," complete line 11.].....
- 11. Is line 7 at least 6 times line 3?.....
- [Fill in either lines 12-15 or lines 16-18:].....
- 12. Current assets.....
- 13. Current liabilities.....
- 14. Net working capital [subtract line 13 from line 12].....
- 15. Is line 14 at least 6 times line 3?.....
- 16. Current bond rating of most recent bond issue.....
- 17. Name of rating service.....
- 18. Date of maturity of bond.....

19. Have financial statements for the latest fiscal year been filed with the SEC, the Energy Information Administration, or the Rural Electrification Administration?.....

[53 FR 43370, Oct. 26, 1988]

280.96 Guarantee.

[If No, please attach a report from an independent certified public accountant certifying that there are no material differences between the data as reported in lines 4-18 above and the financial statements for the latest fiscal year.]

[For both Alternative I and Alternative II complete the certification with this statement.]

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR Part 280.95(d) as such regulations were constituted on the date shown immediately below.

[Signature] _____
 [Name] _____
 [Title] _____
 [Date] _____

(c) If an owner or operator using the test to provide financial assurance finds that he or she no longer meets the requirements of the financial test based on the year-end financial statements, the owner or operator must obtain alternative coverage within 150 days of the end of the year for which financial statements have been prepared.

(f) The Director of the implementing agency may require reports of financial condition at any time from the owner or operator, and/or guarantor. If the Director finds, on the basis of such reports or other information, that the owner or operator, and/or guarantor, no longer meets the financial test requirements of 280.95(b) or (c) and (d), the owner or operator must obtain alternate coverage within 30 days after notification of such a finding.

(g) If the owner or operator fails to obtain alternate assurance within 150 days of finding that he or she no longer meets the requirements of the financial test based on the year-end financial statements, or within 30 days of notification by the Director of the implementing agency that he or she no longer meets the requirements of the financial test, the owner or operator must notify the Director of such failure within 10 days.

(a) An owner or operator may satisfy the requirements of 280.93 by obtaining a guarantee that conforms to the requirements of this section. The guarantor must be:

(1) A firm that (i) possesses a controlling interest in the owner or operator; (ii) possesses a controlling interest in a firm described under paragraph (a)(X)(i) of this section; or, (iii) is controlled through stock ownership by a common parent firm that possesses a controlling interest in the owner or operator; or,

(2) A firm engaged in a substantial business relationship with the owner or operator and issuing the guarantee as an act incident to that business relationship.

(b) Within 120 days of the close of each financial reporting year the guarantor must demonstrate that it meets the financial test criteria of 280.95 based on year-end financial statements for the latest completed financial reporting year by completing the letter from the chief financial officer described in 280.95(d) and must deliver the letter to the owner or operator. If the guarantor fails to meet the requirements of the financial test at the end of any financial reporting year, within 120 days of the end of that financial reporting year the guarantor shall send by certified mail, before cancellation or nonrenewal of the guarantee, notice to the owner or operator. If the Director of the implementing agency notifies the guarantor that he no longer meets the requirements of the financial test of 280.95 (b) or (c) and (d), the guarantor must notify the owner or operator within 10 days of receiving such notification from the Director. In both cases, the guarantee will terminate no less than 120 days after the date the owner or operator receives the notification, as evidenced by the return receipt. The owner or operator must obtain alternative coverage as specified in 280.110(c).

(c) The guarantee must be worded as follows, except that instructions in brackets are

Environmental Protection Agency

to be replaced with the relevant information and the brackets deleted.

Guarantee

Guarantee made this [date] by [name of guaranteeing entity], a business entity organized under the laws of the state of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obligees, on behalf of [owner or operator] of [business address].

Recitals.

(1) Guarantor meets or exceeds the financial test criteria of 40 CFR 280.95 (b) or (c) and (d) and agrees to comply with the requirements for guarantors as specified in 40 CFR 280.96(b).
(2) [Owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert: taking corrective action and/or compensating third parties for bodily injury and property damage caused by either sudden accidental releases or non-sudden accidental releases or accidental releases; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) [insert appropriate phrase: On behalf of our subsidiary (if guarantor is corporate parent of the owner or operator); On behalf of our affiliate (if guarantor is a related firm of the owner or operator); or Incident to our business relationship with (if guarantor is providing the guarantee as an incident to a substantial business relationship with owner or operator)] [owner or operator], guarantor guarantees to

[implementing agency] and to any and all third parties that:

In the event that [owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director], shall fund a standby trust fund in accordance with the provisions of 40 CFR 280.108, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR Part 280, Subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust in accordance with the provisions of 40 CFR 280.108, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [sudden and/or non-sudden] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR 280.108 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that if, at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet the financial test criteria of 40 CFR 280.95 (b) or (c) and (d), guarantor shall send within 120 days of such failure, by certified mail, notice to [owner or operator]. The guarantee will terminate 120 days from the date of receipt of the notice by [owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as

debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR Part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR Part 280, Subpart H for the above-identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR 280.96(c) as such regulations were constituted on the effective date shown immediately below.
Effective date: _____

[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary:

(d) An owner or operator who uses a guarantee to satisfy the requirements of Sec. 280.93 must establish a standby trust fund when the guarantee is obtained. Under the terms of the guarantee, all amounts paid by the guarantor under the guarantee will be deposited directly into the standby trust fund in accordance with instructions from the Director of the implementing agency under 280.108. This standby trust fund must meet the requirements specified in 280.103.

[53 FR 43370, Oct. 26, 1988]

280.97 Insurance and risk retention group coverage.

(a) An owner or operator may satisfy the requirements of 290.93 by obtaining liability insurance that conforms to the requirements of this section from a qualified insurer or risk retention group. Such insurance may be in the form of a separate insurance policy or an endorsement to an existing insurance policy.

(b) Each insurance policy must be amended by an endorsement worded as specified in paragraph (b)(1) of this section, or evidenced by a certificate of insurance worded as specified in paragraph (b)(2) of this section, except that instructions in brackets must be replaced with the relevant information and the brackets deleted.

(1) Endorsement
Name: [name of each covered location]

Address: [address of each covered location]

Policy Number: _____

Period of Coverage: [current policy period]

Name of [Insurer or Risk Retention Group]: _____

Environmental Protection Agency

Address: [address of each covered location]

Policy Number: _____
 Endorsement (if applicable): _____
 Period of Coverage: [current policy period]

Name of [Insurer or Risk Retention Group]: _____

Address of [Insurer or Risk Retention Group]: _____

Name of Insured: _____

Address of Insured: _____

are hereby amended to conform with subsections (a) through (e):

a. Bankruptcy or insolvency of the insured shall not relieve the [Insurer or Group] of its obligations under the policy to which this endorsement is attached.

b. The [Insurer or Group] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the [Insurer or Group]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 40 CFR 280.95-280.102.

c. Whenever requested by [a Director of an implementing agency], the [Insurer or Group] agrees to furnish to [the Director] a signed duplicate original of the policy and all endorsements.

Address of [Insurer or Risk Retention Group]: _____

Name of Insured: _____

Address of Insured: _____

Endorsement:

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering the following underground storage tanks:
 [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility.]

Certification:

1. [Name of Insurer or Risk Retention Group], [the Insurer or Group], as identified above, hereby certifies that it has issued liability insurance covering the following underground storage tank(s):
 [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility.]

d. Cancellation or any other termination of the insurance by the [Insurer or Group] will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured.
 [Insert for claims-made policies:

e. The insurance covers claims for any occurrence that commenced during the term of the policy that is discovered and reported to the [Insurer or Group] within six months of the effective date of the cancellation or termination of the policy.]

for [insert: taking corrective action and/or compensating third parties for bodily injury and property damage caused by either sudden accidental releases or nonsudden accidental releases or accidental releases; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the each occurrence and annual aggregate limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs. This coverage is provided under [policy number]. The effective date of said policy is [date].

I hereby certify that the wording of this instrument is identical to the wording in 40 CFR 280.97(b)(2) and that the [Insurer or Group] is [licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer in one or more states].
 [Signature of authorized representative of Insurer or Risk Retention Group]
 [Name of person signing]
 [Title of person signing]. Authorized Representative of [name of Insurer or Risk Retention Group]
 [Address of Representative]

I hereby certify that the wording of this instrument is identical to the wording in 40 CFR 280.97(b)(2) and that the [Insurer or Group] is [licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states].
 [Signature of authorized representative of Insurer or Risk Retention Group]
 [Name of Insurer or Group]
 [Title of person signing]. Authorized Representative of [name of Insurer or Risk Retention Group]
 [Address of Representative]

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions inconsistent with subsections (a) through (c) of this Paragraph 2

coverage and/or for each underground storage tank or location), exclusive of legal defense costs. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The [Insurer or Group] further certifies the following with respect to the insurance described in Paragraph 1:

a. Bankruptcy or insolvency of the insured shall not relieve the [Insurer or Group] of its obligations under the policy to which this certificate applies.

b. The [Insurer or Group] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the [Insurer or Group]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 40 CFR 280.95-280.102.

c. Whenever requested by [a Director of an implementing agency], the [Insurer or Group] agrees to furnish to [the Director] a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the [Insurer or Group] will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured.
 [Insert for claims-made policies:

e. The insurance covers claims for any occurrence that commenced during the term of the policy that is discovered and reported to the [Insurer or Group] within six months of the effective date of the cancellation or other termination of the policy.]

I hereby certify that the wording of this instrument is identical to the wording in 40 CFR 280.97(b)(2) and that the [Insurer or Group] is [licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states].
 [Signature of authorized representative of Insurer]
 [Type name]
 [Title]. Authorized Representative of [name of Insurer or Risk Retention Group]
 [Address of Representative]

Environmental Protection Agency

280.98

(c) Each insurance policy must be issued by an insurer or a risk retention group that, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

[53 FR 43370, Oct. 26, 1988, as amended at 54 FR 47081, Nov. 9, 1989]

280.98 Surety bond.

(a) An owner or operator may satisfy the requirements of 280.93 by obtaining a surety bond that conforms to the requirements of this section. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in the latest Circular 570 of the U.S. Department of the Treasury.

(b) The surety bond must be worded as follows, except that instructions in brackets must be replaced with the relevant information and the brackets deleted:

Performance Bond

Date bond executed: _____
Period of coverage: _____
Principal: [legal name and business address of owner or operator]

Type of organization: [insert individual, joint venture, partnership, or corporation]

State of incorporation (if applicable): _____

Surety(ies): [name(s) and business address(es)] _____

Scope of Coverage: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility. List the coverage guaranteed by the bond: taking corrective action

and/or compensating third parties for bodily injury and property damage caused by either sudden accidental releases or nonsudden accidental releases or accidental releases arising from operating the underground storage tank].
Penal sum of bond: _____
Per occurrence \$: _____
Annual aggregate \$: _____
Surety's bond number: _____

Know All Persons by These Presents, that we, the Principal and Surety(ies), hereto are firmly bound to [the implementing agency], in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sums jointly and severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sums.

Whereas said Principal is required under Subtitle I of the Resource Conservation and Recovery Act (RCRA), as amended, to provide financial assurance for [insert: taking corrective action and/or compensating third parties for bodily injury and property damage caused by either sudden accidental releases or nonsudden accidental releases or accidental releases; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tanks identified above, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance; Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully [take corrective action, in accordance with 40 CFR Part 280, Subpart F and the Director of the state implementing agency's instructions for, and/or compensate injured third parties for bodily injury and property damage caused by either sudden or nonsudden or sudden and nonsudden] accidental releases

arising from operating the tank(s) identified above, or if the Principal shall provide alternate financial assurance, as specified in 40 CFR Part 280, Subpart H, within 120 days after the date the notice of cancellation is received by the Principal from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

Such obligation does not apply to any of the following:

(a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by [the Director of the implementing agency] that the Principal has failed to [take corrective action, in accordance with 40 CFR Part 280, Subpart F and the Director's instructions, and/or compensate

injured third parties] as guaranteed by this bond, the Surety(ies) shall either perform [corrective action in accordance with 40 CFR Part 280 and the Director's instructions, and/or third-party liability compensation] or place funds in an amount up to the annual aggregate penal sum into the standby trust fund as directed by [the Regional Administrator or the Director] under 40 CFR 280.108.

Upon notification by [the Director] that the Principal has failed to provide alternate

financial assurance within 60 days after the date the notice of cancellation is received by the Principal from the Surety(ies) and that [the Director] has determined or suspects that a release has occurred, the Surety(ies) shall place funds in an amount not exceeding the annual aggregate penal sum into the standby trust fund as directed by [the Director] under 40 CFR 280.108.

The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the annual aggregate to the penal sum shown on the face of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by the Principal, as evidenced by the return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies).

In Witness Whereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 40 CFR 280.98(b) as such regulations were consulted on the date this bond was executed.

Principal
[Signature(s)]
[Name(s)]
[Title(s)]
[Corporate seal]
Corporate Surety(ies)
[Name and address]
[State of Incorporation]: _____
[Liability limit: \$ _____]

Environmental Protection Agency

information as is deemed necessary to make this determination.

(d) Any petition under this section may be submitted on behalf of all of the state's underground storage tank owners and operators.

(e) The Regional Administrator will notify the petitioner of his determination regarding the mechanism's acceptability in this subpart. Pending this determination, the owners and operators using such mechanisms will be deemed to be in compliance with the requirements of 280.93 for underground storage tanks located in the state for the amounts and types of costs covered by such mechanisms.

[53 FR 43370, Oct. 26, 1988, as amended at 53 FR 51274, Dec. 21, 1988]

280.101 State fund or other state assurance.

(a) An owner or operator may satisfy the requirements of 280.93 for underground storage tanks located in a state, where EPA is administering the requirements of this subpart, which assures that monies will be available from a state fund or state assurance program to cover costs up to the limits specified in 280.93 or otherwise assures that such costs will be paid if the Regional Administrator determines that the state's assurance is at least equivalent to the financial mechanisms specified in this subpart.

(b) The Regional Administrator will evaluate the equivalency of a state fund or other state assurance principally in terms of: Certainty of the availability of funds for taking corrective action and/or for compensating third parties; the amount of funds that will be made available; and the types of costs covered. The Regional Administrator may also consider other factors as is necessary.

(c) The state must submit to the Regional Administrator a description of the state fund or other state assurance to be supplied as financial assurance, along with a list of the classes of underground storage tanks to which the funds may be applied. The Regional Administrator may require the state to submit additional information as is deemed necessary to make a determination regarding the acceptability of the state fund or other state assurance. Pending the determination by the Regional Administrator,

the owner or operator of a covered class of USFs will be deemed to be in compliance with the requirements of 280.93 for the amounts and types of costs covered by the state fund or other state assurance.

(d) The Regional Administrator will notify the state of his determination regarding the acceptability of the state's fund or other assurance in lieu of financial mechanisms specified in this subpart. Within 60 days after the Regional Administrator notifies a state that a state fund or other state assurance is acceptable, the state must provide to each owner or operator for which it is assuming financial responsibility a letter or certificate describing the nature of the state's assumption of responsibility. The letter or certificate from the state must include, or have attached to it, the following information: the facility's name and address and the amount of funds for corrective action and/or for compensating third parties that is assured by the state. The owner or operator must maintain this letter or certificate on file as proof of financial responsibility in accordance with 280.107(b)(5).

[53 FR 43370, Oct. 26, 1988]

280.102 Trust fund.

(a) An owner or operator may satisfy the requirements of 280.93 by establishing a trust fund that conforms to the requirements of this section. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal agency or an agency of the state in which the fund is established.

(b) The wording of the trust agreement must be identical to the wording specified in 280.103(b)(1), and must be accompanied by a formal certification of acknowledgement as specified in 280.103(b)(2).

(c) The trust fund, when established, must be funded for the full required amount of coverage, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining required coverage.

(d) If the value of the trust fund is greater than the required amount of coverage, the owner or operator may submit a written request

to the Director of the implementing agency for release of the excess.

(e) If other financial assurance as specified in this subpart is substituted for all or part of the trust fund, the owner or operator may submit a written request to the Director of the implementing agency for release of the excess.

(f) Within 60 days after receiving a request from the owner or operator for release of funds as specified in paragraph (d) or (e) of this section, the Director of the implementing agency will instruct the trustee to release to the owner or operator such funds as the Director specifies in writing.

[53 FR 43370, Oct. 26, 1988]

280.103 Standby trust fund.

(a) An owner or operator using any one of the mechanisms authorized by 280.96, 280.98, or 280.99 must establish a standby trust fund when the mechanism is acquired. The trustee of the standby trust fund must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal agency or an agency of the state in which the fund is established.

(b)(1) The standby trust agreement, or trust agreement, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Trust Agreement

Trust agreement, the Agreement, entered into as of [date] by and between [name of the owner or operator], a [name of state] [insert corporation, partnership, association, or proprietorship], the Grantor, and [name of corporate trustee], [insert incorporated in the state of ___ or a national bank], the Trustee.

Whereas, the United States Environmental Protection Agency, EPA, an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of an underground storage tank shall provide assurance that funds will be available when needed for corrective action and third-party compensation for bodily injury and property damage caused by sudden and nonsudden

accidental releases arising from the operation of the underground storage tank. The attached Schedule A lists the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located that are covered by the standby trust agreement.

[Whereas, the Grantor has elected to establish [insert either a guarantee, surety bond, or letter of credit] to provide all or part of such financial assurance for the underground storage tanks identified herein and is required to establish a standby trust fund able to accept payments from the instrument (This paragraph is only applicable to the standby trust agreement.);

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee;

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions

As used in this Agreement:

(a) The term Grantor means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term Trustee means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of the Financial Assurance Mechanism.

This Agreement pertains to the [identify the financial assurance mechanism, either a guarantee, surety bond, or letter of credit, from which the standby trust fund is established to receive payments (This paragraph is only applicable to the standby trust agreement)].

Section 3. Establishment of Fund.

The Grantor and the Trustee hereby establish a trust fund, the Fund, for the benefit of [implementing agency]. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. [The Fund is established initially as a standby to receive payments and shall not consist of any property.] Payments made by the provider of financial assurance pursuant to [the Director of the implementing agency's] instruction are transferred to the Trustee and are referred to as

the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor as provider of financial assurance, any payments necessary to discharge any liability of the Grantor established by [the state implementing agency].

Section 4. Payment for [Corrective Action and/or Third-Party Liability Claims].

The Trustee shall make payments from the Fund as [the Director of the implementing agency] shall direct, in writing, to provide for the payment of the costs of [insert: taking corrective action and/or compensating third parties for bodily injury and property damage caused by* either sudden accidental releases or nonsudden accidental releases or accidental releases] arising from operating the tanks covered by the financial assurance mechanism identified in this Agreement.

The Fund may not be drawn upon to cover any of the following:

- (a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of employment by [insert owner or operator];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;
- (e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

The Trustee shall reimburse the Grantor, or other persons as specified by [the Director], from the Fund for corrective action expenditures and/or third-party liability claims in such amounts as [the Director] shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as [the Director] specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund

Payments made to the Trustee for the Fund shall consist of cash and securities acceptable to the Trustee.

Section 6. Trustee Management.

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (i) Securities or other obligations of the Grantor, or any other owner or operator of the tanks, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;
- (ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and
- (iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment
The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued

by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

- (d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses.

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any questions arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall

Environmental Protection Agency

assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in writing sent to the Grantor and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee.

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule B or such other designees as the Grantor may designate by amendment to Schedule B. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by [the Director of the implementing agency] to the Trustee shall be in writing, signed by [the Director], and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or [the director] hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or [the Director], except as provided for herein.

Section 14. Amendment of Agreement

This Agreement may be amended by an instrument in writing executed by the Grantor and the Trustee, or by the Trustee and [the Director of the implementing agency] if the Grantor ceases to exist.

Section 15. Irrevocability and Termination

Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue

until terminated at the written direction of the Grantor and the Trustee, or by the Trustee and [the Director of the implementing agency], if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 16. Immunity and Indemnification

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or [the Director of the implementing agency] issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law

This Agreement shall be administered, construed, and enforced according to the laws of the state of [insert name of state], or the Comptroller of the Currency in the case of National Association banks.

Section 18. Interpretation

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals (if applicable) to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 40 CFR 280.103(O)(1) as such regulations were constituted on the date written above.

[Signature of Grantor]
[Name of the Grantor]
[Title]
Attest:

[Signature of Trustee]
[Name of the Trustee]
[Title]
[Seal]
[Signature of Witness]
[Name of the Witness]
[Title]
[Seal]

(2) The standby trust agreement, or trust agreement, must be accompanied by a formal certification of acknowledgement similar to the following. State requirements may differ on the proper content of this acknowledgment.

County of _____
On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]
[Name of Notary Public]

(c) The Director of the implementing agency will instruct the trustee to refund the balance of the standby trust fund to the provider of financial assurance if the Director determines that no additional corrective action costs or third-party liability claims will occur as a result of a release covered by the financial assurance mechanism for which the standby trust fund was established.

(d) An owner or operator may establish one trust fund as the depository mechanism for all funds assured in compliance with this rule. [53 FR 43370, Oct. 26, 1988, as amended at 53 FR 51274, Dec. 21, 1988]

280.104 Local government bond rating test.

(a) A general purpose local government owner or operator and/or local government serving as a guarantor may satisfy the requirements of § 280.93 by having a currently outstanding issue or issues of general obligation

bonds of \$1 million or more, excluding refunded obligations, with a Moody's rating of Aaa, Aa, A, or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB. Where a local government has multiple outstanding issues, or where a local government's bonds are rated by both Moody's and Standard and Poor's, the lowest rating must be used to determine eligibility. Bonds that are backed by credit enhancement other than municipal bond insurance may not be considered in determining the amount of applicable bonds outstanding.

(b) A local government owner or operator or local government serving as a guarantor that is not a general-purpose local government and does not have the legal authority to issue general obligation bonds may satisfy the requirements of § 280.93 by having a currently outstanding issue or issues of revenue bonds of \$1 million or more, excluding refunded issues and by also having a Moody's rating of Aaa, A, Aa, or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB as the lowest rating for any rated revenue bond issued by the local government. Where bonds are rated by both Moody's and Standard & Poor's, the lower rating for each bond must be used to determine eligibility. Bonds that are backed by credit enhancement may not be considered in determining the amount of applicable bonds outstanding.

(c) The local government owner or operator and/or guarantor must maintain a copy of its bond rating published within the last 12 months by Moody's or Standard & Poor's.

(d) To demonstrate that it meets the local government bond rating test, the chief financial officer of a general purpose local government owner or operator and/or guarantor must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"]

Environmental Protection Agency

caused by [insert: "sudden accidental releases" and/or "non-sudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this bond rating test: [List for each facility: the name and address of the facility where tanks are assured by the bond rating test].

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding bond issues that are being used by [name of local government owner or operator, or guarantor] to demonstrate financial responsibility are as follows: [complete table]

Issue date	Maturity date	Outstanding amount	Bond rating	Rating agency
				[Moody's or Standard & Poor's]

The total outstanding obligation of [insert amount], excluding refunded bond issues, exceeds the minimum amount of \$1 million. All outstanding general obligation bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last 12 months. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues. I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR Part 280.10-4(d) as such regulations were constituted on the date shown immediately below.

[Date] _____
[Signature] _____
[Name] _____
[Title] _____

(c) To demonstrate that it meets the local government bond rating test, the chief financial officer of local government owner or operator and/or guarantor other than a general purpose government must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" and/or "non-sudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s). This local government is not organized to provide general governmental services and does not have the legal authority under state law or constitutional provisions to issue general obligation debt.

Underground storage tanks at the following facilities are assured by this bond rating test: [List for each facility: the name and address of the facility where tanks are assured by the bond rating test].

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding revenue bond issues that are being used by [name of local government owner or operator, or guarantor] to demonstrate financial responsibility are as follows: [complete table]

Issue date	Maturity date	Outstanding amount	Bond rating	Rating agency
				[Moody's or Standard & Poor's]

The total outstanding obligation of [insert amount], excluding refunded bond issues, exceeds the minimum amount of \$1 million. All outstanding revenue bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last 12 months. The revenue bonds listed are not backed by third-party credit enhancement or are insured by a municipal bond insurance company. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR Part 280.104(e) as such regulations were constituted on the date shown immediately below.

[Date] _____
[Signature] _____
[Name] _____
[Title] _____

(f) The Director of the implementing agency may require reports of financial condition at any time from the local government owner or operator, and/or local government guarantor. If the Director finds, on the basis of such reports or other information, that the local government owner or operator, and/or guarantor, no longer meets the local government bond rating test requirements of § 280.104, the local government owner or operator must obtain alternative coverage within 30 days after notification of such a finding.

(g) If a local government owner or operator using the bond rating test to provide financial assurance finds that it no longer meets the bond rating test requirements, the local government owner or operator must obtain alternative coverage within 150 days of the change in status.

[58 FR 9053, Feb. 18, 1993]

280.105 Local government financial test.

(a) A local government owner or operator may satisfy the requirements of § 280.93 by passing the financial test specified in this section. To be eligible to use the financial test, the local government owner or operator must have the ability and authority to assess and levy taxes or to freely establish fees and charges. To pass the local government financial test, the owner or operator must meet the criteria of paragraphs (b)(2) and (b)(3) of this section based on year-end financial statements for the latest completed fiscal year.

(b)(1) The local government owner or operator must have the following information available, as shown in the year-end financial statements for the latest completed fiscal year:

- (i) Total revenues: Consists of the sum of general fund operating and non-operating revenues including net local taxes, licenses and permits, fines and forfeitures, revenues from use of money and property, charges for services, investment earnings, sales (property, publications, etc.), intergovernmental revenues (restricted and unrestricted), and total revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity. For purposes of this test, the calculation of total revenues shall exclude all transfers between funds under the direct control of the local government using the financial test (interfund transfers), liquidation of investments, and issuance of debt.
- (ii) Total expenditures: Consists of the sum of general fund operating and non-operating expenditures including public safety, public utilities, transportation, public works, environmental protection, cultural and

Environmental Protection Agency

recreational, community development, revenue sharing, employee benefits and compensation, office management, planning and zoning, capital projects, interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues. For purposes of this test, the calculation of total expenditures shall exclude all transfers between funds under the direct control of the local government using the financial test (interfund transfers).

(iii) Local revenues: Consists of total revenues (as defined in paragraph (b)(1)(i) of this section) minus the sum of all transfers from other governmental entities, including all monies received from Federal, state, or local government sources.

(iv) Debt service: Consists of the sum of all interest and principal payments on all long-term credit obligations and all interest-bearing short-term credit obligations. Includes interest and principal payments on general obligation bonds, revenue bonds, notes, mortgages, judgments, and interest bearing warrants. Excludes payments on non-interest-bearing short-term obligations, interfund obligations, amounts owed in a trust or agency capacity, and advances and contingent loans from other governments.

(v) Total funds: Consists of the sum of cash and investment securities from all funds, including general, enterprise, debt service, capital projects, and special revenue funds, but excluding employee retirement funds, at the end of the local government's financial reporting year. Includes Federal securities, Federal agency securities, state and local government securities, and other securities such as bonds, notes and mortgages. For purposes of this test, the calculation of total funds shall exclude agency funds, private trust funds, accounts receivable, value of real property, and other non-security assets.

(vi) Population consists of the number of people in the area served by the local government.

(2) The local government's year-end financial statements, if independently audited, cannot include an adverse auditor's opinion or a disclaimer of opinion. The local government cannot have outstanding issues of general

obligation or revenue bonds that are rated as less than investment grade.

(3) The local government owner or operator must have a letter signed by the chief financial officer worded as specified in paragraph (c) of this section.

(c) To demonstrate that it meets the financial test under paragraph (b) of this section, the chief financial officer of the local government owner or operator, must sign, within 120 days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter From Chief Financial Officer

I am the chief financial officer of [insert: name and address of the owner or operator]. This letter is in support of the use of the local government financial test to demonstrate financial responsibility for [insert: "making corrective action" and/or "compensating third parties for bodily injury and property damage"] and/or "sudden accidental releases" in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating [an] underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test [List for each facility: the name and address of the facility where tanks assured by this financial test are located. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test by the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280.22 or the corresponding state requirements.]

This owner or operator has not received an adverse opinion, or a disclaimer of opinion from an independent auditor on its financial statements for the latest completed fiscal year. Any outstanding issues of general obligation or revenue bonds, if rated, have a Moody's rating of Aaa, Aa, A, or Baa or a Standard and Poor's rating of AAA, AA, A, or BBB; if rated by both

firms, the bonds have a Moody's rating of Aaa, Aa, A, or Baa and a Standard and Poor's rating of AAA, AA, A, or BBB.

Worksheet for Municipal Financial Test

Part I: Basic Information

1. Total Revenues
 - a. Revenues (dollars) _____
 - Value of revenues excludes liquidation of investments and issuance of debt. Value includes all general fund operating and non-operating revenues, as well as all revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity.
 - b. Subtract interfund transfers _____
 - c. Total Revenues (dollars) _____
 - Total Expenditures _____
 - a. Expenditures (dollars) _____
 - Value consists of the sum of general fund operating and non-operating expenditures including interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues.
 - b. Subtract interfund transfers _____
 - c. Total Expenditures (dollars) _____

3. Local Revenues (dollars) _____
- a. Total Revenues (from 1c) (dollars) _____
- b. Subtract total intergovernmental transfers (dollars) _____
- c. Local Revenues (dollars) _____
4. Debt Service _____
- a. Interest and fiscal charges (dollars) _____
- b. Add debt retirement (dollars) _____
- c. Total Debt Service (dollars) _____
5. Total Funds (Dollars) _____
- (Sum of amounts held as cash and investment securities from all funds, excluding amounts held for employee retirement funds, agency funds, and trust funds)
6. Population (Persons) _____

Part II: Application of Test

7. Total Revenues to Population
 - a. Total Revenues (from 1c) _____
 - b. Population (from 6) _____
 - c. Divide 7a by 7b _____
 - d. Subtract 417 _____
 - e. Divide by 5.212 _____
 - f. Multiply by 4.095 _____
8. Total Expenses to Population
 - a. Total Expenses (from 2c) _____
 - b. Population (from 6) _____
 - c. Divide 8a by 8b _____
 - d. Subtract 524 _____
 - e. Divide by 5.401 _____
 - f. Multiply by 4.095 _____
9. Local Revenues to Total Revenues
 - a. Local Revenues (from 3c) _____
 - b. Total Revenues (from 1c) _____
 - c. Divide 9a by 9b _____
 - d. Subtract .695 _____
 - e. Divide by .205 _____
 - f. Multiply by 2.840 _____
10. Debt Service to Population
 - a. Debt Service (from 4d) _____
 - b. Population (from 6) _____
 - c. Divide 10a by 10b _____
 - d. Subtract 51 _____
 - e. Divide by 1.038 _____
 - f. Multiply by -1.866 _____
11. Debt Service to Total Revenues
 - a. Debt Service (from 4d) _____
 - b. Total Revenues (from 1c) _____
 - c. Divide 11a by 11b _____
 - d. Subtract .068 _____
 - e. Divide by .259 _____
 - f. Multiply by -3.533 _____
12. Total Revenues to Total Expenses
 - a. Total Revenues (from 1c) _____
 - b. Total Expenses (from 2c) _____
 - c. Divide 12a by 12b _____
 - d. Subtract .910 _____
 - e. Divide by .899 _____
 - f. Multiply by 3.458 _____
13. Funds Balance to Total Revenues
 - a. Total Funds (from 5) _____
 - b. Total Revenues (from 1c) _____
 - c. Divide 13a by 13b _____
 - d. Subtract .891 _____
 - e. Divide by 9.156 _____
 - f. Multiply by 3.270 _____
14. Funds Balance to Total Expenses
 - a. Total Funds (from 5) _____
 - b. Total Expenses (from 2c) _____

Environmental Protection Agency

280.106

[58 FR 9054, Feb. 18, 1993]

280.106 Local government guarantee.

fund a standby trust as directed by the Director of the implementing agency, the guarantee shall be worded as specified in paragraph (d) of this section.

- c. Divide 14a by 14b _____
- d. Subtract .866 _____
- e. Divide by 6.409 _____
- f. Multiply by 3.270 _____
- 15. Total Funds to Population _____
- a. Total Funds (from 5) _____
- b. Population (from 6) _____
- c. Divide 15a by 15b _____
- d. Subtract 270 _____
- e. Divide by 4,348 _____
- f. Multiply by 1,866 _____

16. Add 7f + 8f + 9f + 10f + 11f + 12f + 13f + 14f + 15f + 4.937 _____

I hereby certify that the financial index shown on line 16 of the worksheet is greater than zero and that the wording of this letter is identical to the wording specified in 40 CFR Part 280.105(c) as such regulations were constituted on the date shown immediately below.

[Date] _____
 [Signature] _____
 [Name] _____
 [Title] _____

(d) If a local government owner or operator using the test to provide financial assurance finds that it no longer meets the requirements of the financial test based on the year-end financial statements, the owner or operator must obtain alternative coverage within 150 days of the end of the year for which financial statements have been prepared.

(e) The Director of the implementing agency may require reports of financial condition at any time from the local government owner or operator. If the Director finds, on the basis of such reports or other information, that the local government owner or operator no longer meets the financial test requirements of § 280.105 (b) and (c), the owner or operator must obtain alternate coverage within 30 days after notification of such a finding.

(f) If the local government owner or operator fails to obtain alternate assurance within 150 days of finding that it no longer meets the requirements of the financial test based on the year-end financial statements or within 30 days of notification by the Director of the implementing agency that it no longer meets the requirements of the financial test, the owner or operator must notify the Director of such failure within 10 days.

(1) demonstrate that it meets the bond rating test requirement of § 280.104 and deliver a copy of the chief financial officer's letter as contained in § 280.104(c) to the local government owner or operator, or

(2) demonstrate that it meets the worksheet test requirements of § 280.105 and deliver a copy of the chief financial officer's letter as contained in § 280.105(c) to the local government owner or operator, or

(3) demonstrate that it meets the local government fund requirements of § 280.107(a), § 280.107(b), or § 280.107(c) and deliver a copy of the chief financial officer's letter as contained in § 280.107 to the local government owner or operator.

(b) If the local government guarantor is unable to demonstrate financial assurance under any of § 280.104, 280.105, 280.107(a), 280.107(b), or 280.107(c), at the end of the financial reporting year, the guarantor shall send by certified mail, before cancellation or non-renewal of the guarantee, notice to the owner or operator. The guarantee will terminate no less than 120 days after the date the owner or operator receives the notification, as evidenced by the return receipt. The owner or operator must obtain alternate coverage as specified in § 280.114(c).

(c) The guarantee agreement must be worded as specified in paragraph (d) or (e) of this section, depending on which of the following alternative guarantee arrangements is selected:

(1) If, in the default or incapacity of the owner or operator, the guarantor guarantees to

(3) Guarantor guarantees to [implementing agency] and to any and all third parties that: In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR part 280.112, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR part 280.112, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "non-sudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR part 280.112 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(6) Guarantor agrees to remain bound under this guarantee for so long as [local government

(d) If the guarantor is a state, the local government guarantee with standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee With Standby Trust Made by a State Guarantor made this [date] by [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

Recitals

(1) Guarantor is a state.

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "non-sudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(1) Guarantor guarantees to [implementing agency] and to any and all third parties that: In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR part 280.112, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR part 280.112 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(6) Guarantor agrees to remain bound under this guarantee for so long as [local government

Environmental Protection Agency

owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(7) The guarantor's obligation does not apply to any of the following:
(a) Any obligation of [local government owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];
(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR part 280.93.

(8) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR part 280.106(d) as such regulations were constituted on the effective date shown immediately below.

Effective date:
[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary:

If the guarantor is a local government, the local government guarantee with standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:
Local Government Guarantee With Standby Trust Made by a Local Government

Guarantee made this [date] by [name of guaranteee entity], a local government organized under the laws of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

Recitals

(1) Guarantor meets or exceeds [select one: the local government bond rating test requirements of 40 CFR Part 280.104, the local government financial test requirements of 40 CFR Part 280.105, or the local government fund under 40 CFR Part 280.107(a), 280.107(b), or 280.107(c)].

(2) [Local government owner or operator] owns and operates the following underground storage tank(s) covered by this guarantee:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "non-sudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert: dollar amount] annual aggregate.

(3) Incident to our substantial governmental relationship with [local government owner or operator] by certified mail of a voluntary or

operator], guarantor guarantees to [implementing agency] and to any and all third parties that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR Part 280.112, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR Part 280, Subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR Part 280.112, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "non-sudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR Part 280.112 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that, if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within 120 days of such failure, by certified mail, notice to [local government owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or

involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR Part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR Part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR Part 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator].

Environmental Protection Agency

280.106

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR Part 280.106(d) as such regulations were constituted on the effective date shown immediately below.

[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary:

(e) If the guarantor is a state, the local government guarantee without standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee Without Standby Trust Made by a State

Guarantee made this [date] by [name of state], herein referred to as guarantor, to [the third parties, and obliges, on behalf of [local government owner or operator].

Recitals

- (1) Guarantor is a state.
- (2) [Local government owner or operator owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "non-sudden accidental releases" or "accidental releases"; if coverage is different for different tanks or

locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate.

(3) Guarantor guarantees to [implementing agency] and to any and all third parties and obliges that:
In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon written instructions from the [Director] shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR Part 280, Subpart F, the guarantor upon written instructions from the [Director] shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "non-sudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR Part 280.

(6) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR Part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt. If notified of a probable release, the guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(7) The guarantor's obligation does not apply to any of the following:

- (a) Any obligation of [local government owner or operator] under a workers' compensation disability benefit, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [insert local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;
- (e) Bodily damage or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR Part 280.93.
- (8) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third

parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR Part 280.106(e) as such regulations were constituted on the effective date shown immediately below.

[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary:

If the guarantor is a local government, the local government guarantee without standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee Without Standby Trust Made by a Local Government

Guarantee made this [date] by [name of guaranteeing entity], a local government organized under the laws of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

Recitals

(1) Guarantor meets or exceeds [select one: the local government bond rating test requirements of 40 CFR part 280.104, the local government financial test requirements of 40 CFR part 280.105, the local government fund under 40 CFR part 280.107(a), 280.107(b), or 280.107(c).

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the

Environmental Protection Agency

corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR part 280, subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "non-sudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate.

(3) Incident to our substantial governmental relationship with [local government owner or operator], guarantor guarantees to [implementing agency] and to any and all third parties and obliges that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon written instructions from the [Director] shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, Subpart F, the guarantor upon written instructions from the [Director] shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "non-sudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon

written instructions from the [Director], shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees that if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within 120 days of such failure, by certified mail, notice to [local government owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR, Part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt. If notified of a probable release, the guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entitlement to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, leased to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR Part 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR Part 280.106(e) as such regulations were constituted on the effective date shown immediately below.

Effective date: _____
[Name of guarantor] _____
[Authorized signature for guarantor] _____
[Name of person signing] _____
[Title of person signing] _____
Signature of witness or notary: _____
[58 FR 9054, Feb. 18, 1993]

280.107 Local government fund.

A local government owner or operator may satisfy the requirements of § 280.93 by establishing a dedicated fund account that conforms to the requirements of this section. Except as specified in paragraph (b), a dedicated fund may not be commingled with other funds or otherwise used in normal operations. A dedicated fund will be considered eligible if it meets one of the following requirements:

(a) The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance, or order to pay for taking corrective action, or for compensating third parties for bodily injury and property damage caused by accidental releases arising

from the operation of petroleum underground storage tanks and is funded for the full amount of coverage required under § 280.93, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage; or

(b) The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance, or order as a contingency fund for general emergencies, including taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks, and is funded for five times the full amount of coverage required under § 280.93, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage. If the fund is funded for less than five times the amount of coverage required under § 280.93, the amount of financial responsibility demonstrated by the fund may not exceed one-fifth the amount in the fund; or

(c) The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks. A payment is made to the fund once every year for seven years until the fund is fully-funded. This seven year period is hereafter referred to as the "pay-in-period." The amount of each payment must be determined by this formula:

$$\frac{TF-CF}{Y}$$

Where TF is the total required financial assurance for the owner or operator, CF is the current amount in the fund, and Y is the number of years remaining in the pay-in-period, and;

(1) The local government owner or operator has available bonding authority, approved through voter referendum (if such approval is necessary prior to the issuance of bonds), for an amount equal to the difference between the

Environmental Protection Agency

280.110

required amount of coverage and the amount held in the dedicated fund. This bonding authority shall be available for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks, or (2) The local government owner or operator has a letter signed by the appropriate state attorney general stating that the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established by the relevant state laws. The letter must also state that prior voter approval is not necessary before use of the bonding authority.

(d) To demonstrate that it meets the requirements of the local government fund, the chief financial officer of the local government owner or operator and/or guarantor must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the local government fund mechanism to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage" caused by [insert: "sudden accidental releases" and/or "unsudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this local government fund mechanism: [List for each facility: the name and address of the facility where tanks are assured by the local government fund].
[insert: "The local government fund is funded for the full amount of coverage required under § 280.93, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage." or "The local government fund is funded for ten times the full

amount of coverage required under § 280.93, or funded for part of the required amount of coverage and used in combination with other mechanisms(e) that provide the remaining coverage," or "A payment is made to the fund once every year for seven years until the fund is fully-funded and [name of local government owner or operator] has available bonding authority, approved through voter referendum, of an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund" or "A payment is made to the fund once every year for seven years until the fund is fully-funded and I have attached a letter signed by the State Attorney General stating that (1) the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established by the relevant state laws and (2) that prior voter approval is not necessary before use of the bonding authority"].

The details of the local government fund are as follows:
Amount in Fund (market value of fund at close of last fiscal year): _____
[If fund balance is incrementally funded as specified in § 280.107(c), insert:
Amount added to fund in the most recently completed fiscal year: _____
Number of years remaining in the pay-in period: _____]

A copy of the state constitutional provision, or local government statute, charter, ordinance or order dedicating the fund is attached.
I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 280.107(d) as such regulations were constituted on the date shown immediately below.

[Date]
[Signature]
[Name]
[Title]

[§§ FR 9054, Feb. 18, 1993]

280.108 Substitution of financial assurance mechanisms by owner or operator.

(a) An owner or operator may substitute any alternate financial assurance mechanisms as

specified in this subpart, provided that at all times he maintains an effective financial assurance mechanism or combination of mechanisms that satisfies the requirements of 280.93.

(b) After obtaining alternate financial assurance as specified in this subpart, an owner or operator may cancel a financial assurance mechanism by providing notice to the provider of financial assurance.

[§3 FR 43370, Oct. 26, 1988, as amended at 58 FR 9053, Feb. 18, 1993]

280.109 Cancellation or nonrenewal by a provider of financial assurance.

(a) Except as otherwise provided, a provider of financial assurance may cancel or fail to renew an assurance mechanism by sending a notice of termination by certified mail to the owner or operator.

(1) Termination of a local government guarantee, a guarantee, a surety bond, or a letter of credit may not occur until 120 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(2) Termination of insurance or risk retention coverage, except for non-payment or misrepresentation by the insured, or state-funded assurance may not occur until 60 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt. Termination for non-payment of premium or misrepresentation by the insured may not occur until a minimum of 10 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(b) If a provider of financial responsibility cancels or fails to renew for reasons other than incapacity of the provider as specified in § 280.114, the owner or operator must obtain alternate coverage as specified in this section within 60 days after receipt of the notice of termination. If the owner or operator fails to obtain alternate coverage within 60 days after receipt of the notice of termination, the owner

or operator must notify the Director of the implementing agency of such failure and submit:
(1) The name and address of the provider of financial assurance;

(2) The effective date of termination; and
(3) The evidence of the financial assistance mechanism subject to the termination maintained in accordance with § 280.107(b).

[§3 FR 43370, Oct. 26, 1988, as amended at 54 FR 47082, Nov. 9, 1989; 58 FR 9054, Feb. 18, 1993]

280.110 Reporting by owner or operator.

(a) An owner or operator must submit the appropriate forms listed in § 280.111(b) documenting current evidence of financial responsibility to the Director of the implementing agency:

(1) Within 30 days after the owner or operator identifies a release from an underground storage tank required to be reported under § 280.53 or § 280.61;

(2) If the owner or operator fails to obtain alternate coverage as required by this subpart, within 30 days after the owner or operator receives notice of:

(i) Commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a provider of financial assurance as a debtor;

(ii) Suspension or revocation of the authority of a provider of financial assurance to issue a financial assurance mechanism;

(iii) Failure of a guarantor to meet the requirements of the financial test;

(iv) Other incapacity of a provider of financial assurance; or

(3) As required by § 280.93(g) and § 280.109(b).

(b) An owner or operator must certify compliance with the financial responsibility requirements of this part as specified in the new tank notification form when notifying the appropriate state or local agency of the installation of a new underground storage tank under § 280.22.

(c) The Director of the Implementing Agency may require an owner or operator to submit evidence of financial assurance as described in § 280.111(b) or other information

Environmental Protection Agency

relevant to compliance with this subpart at any time.

(The information requirements in this section have been approved by the Office of Management and Budget and assigned OMB control number 2050-0066.)
[53 FR 43370, Oct. 26, 1988, as amended at 58 FR 9056, Feb. 18, 1993]

280.111 Recordkeeping

(a) Owners or operators must maintain evidence of all financial assurance mechanisms used to demonstrate financial responsibility under this subpart for an underground storage tank until released from the requirements of this subpart under § 208.113. An owner or operator must maintain such evidence at the underground storage tank site or the owner's or operator's place of work. Records maintained off-site must be made available upon request of the implementing agency.

(b) An owner or operator must maintain the following types of evidence of financial responsibility:

- (1) An owner or operator using an assurance mechanism specified in § 280.95 through 280.100 or § 280.102 or §§ 280.104 through 280.107 must maintain a copy of the instrument worded as specified.
- (2) An owner or operator using a financial test or guarantee, or a local government financial test or a local government guarantee supported by the local government financial test must maintain a copy of the chief financial officer's letter based on year-end financial statements for the most recent completed financial reporting year. Such evidence must be on file no later than 120 days after the close of the financial reporting year.
- (3) An owner or operator using a guarantee, surety bond, or letter of credit must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.
- (4) A local government owner or operator using a local government guarantee under § 280.106(d) must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.
- (5) A local government owner or operator using the local government bond rating test under § 280.104 must maintain a copy of its

bond rating published within the last twelve months by Moody's or Standard & Poor's.

(6) A local government owner or operator using the local government guarantee under § 280.106, where the guarantor's demonstration of financial responsibility relies on the bond rating test under § 280.104 must maintain a copy of the guarantor's bond rating published within the last twelve months by Moody's or Standard & Poor's.

(7) An owner or operator using an insurance policy or risk retention group coverage must maintain a copy of the signed insurance policy or risk retention group coverage policy, with the endorsement or certificate of insurance and any amendments to the agreement.

(8) An owner or operator covered by a state fund or other state assurance must maintain on file a copy of any evidence of coverage supplied by or required by the state under § 280.101(d).

(9) An owner or operator using a local government fund under § 280.107 must maintain the following documents:

- (i) A copy of the state constitutional provision or local government statute, charter, ordinance, or order dedicating the fund, and
- (ii) Year-end financial statements for the most recent completed financial reporting year showing the amount in the fund. If the fund is established under § 280.107(e)(3) using incremental funding backed by bonding authority, the financial statements must show the previous year's balance, the amount of funding during the year, and the closing balance in the fund.
- (iii) If the fund is established under § 280.107(e)(3) using incremental funding backed by bonding authority, the owner or operator must also maintain documentation of the required bonding authority, including either the results of a voter referendum (under § 280.107(e)(3)(i)), or attestation by the State Attorney General as specified under § 280.107(e)(3)(ii).

(10) A local government owner or operator using the local government guarantee supported by the local government fund must maintain a copy of the guarantor's year-end financial statements for the most recent completed financial reporting year showing the amount of the fund.

(11)(i) An owner or operator using an assurance mechanism specified in §§ 280.95 through 280.107 must maintain an updated copy of a certification of financial responsibility worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:
Certification of Financial Responsibility
[Owner or operator] hereby certifies that it is in compliance with the requirements of subpart H of 40 CFR part 280. The financial assurance mechanism(s) used to demonstrate financial responsibility under subpart H of 40 CFR part 280 is (are) as follows: [For each mechanism, list the type of mechanism, name of issuer, mechanism number (if applicable), amount of coverage, effective period of coverage and whether the mechanism covers "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases."]

[Signature of owner or operator]
[Name of owner or operator]
[Title]
[Date]
[Signature of witness or notary]
[Name of witness or notary]
[Date]
(ii) The owner or operator must update this certification whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s).
(The information requirements in this section have been approved by the Office of Management and Budget and assigned OMB control number 2050-0066.)
[53 FR 43370, Oct. 26, 1988, as amended at 58 FR 9059, Feb. 18, 1993]

280.112 Drawing on financial assurance mechanisms.

(a) Except as specified in paragraph (d) of this section, the Director of the implementing agency shall require the guarantor, surety, or institution issuing a letter of credit to place the amount of funds stipulated by the Director, up to the limit of funds provided by the financial assurance mechanism, into the standby trust if:
(1)(i) The owner or operator fails to establish alternate financial assurance within 60

days after receiving notice of cancellation of the guarantee, surety bond, letter of credit, or, as applicable, other financial assurance mechanism; and

(ii) The Director determines or suspects that a release from an underground storage tank covered by the mechanism has occurred and so notifies the owner or operator or the owner or operator has notified the Director pursuant to subparts E or F of a release from an underground storage tank covered by the mechanism; or

(2) The conditions of paragraph (b)(1) or (b)(2) (i) or (ii) of this section are satisfied.

(b) The Director of the implementing agency may draw on a standby trust fund when:
(1) The Director makes a final determination that a release has occurred and immediate or long-term corrective action for the release is needed, and the owner or operator, after appropriate notice and opportunity to comply, has not conducted corrective action as required under 40 CFR part 280, subpart F; or
(2) The Director has received either:

- (i) Certification from the owner or operator and the third-party liability claimant(s) and from attorneys representing the owner or operator and the third-party liability claimant(s) that a third-party liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim
The undersigned, as principals and as legal representatives of [insert: owner or operator] and [insert: name and address of third-party claimant], hereby certify that the claim of bodily injury [and/or] property damage caused by an accidental release arising from operating [owner's or operator's] underground storage tank should be paid in the amount of \$[]

[Signatures]
Owner or Operator
Attorney for Owner or Operator
(Notary)
Date
[Signatures]
Claimant(s)
Attorney(s) for Claimant(s)
(Notary)
Date

Environmental Protection Agency

280.116

or (ii) A valid final court order establishing a judgment against the owner or operator for bodily injury or property damage caused by an accidental release from an underground storage tank covered by financial assurance under this subpart and the Director determines that the owner or operator has not satisfied the judgment.

(c) If the Director of the implementing agency determines that the amount of corrective action costs and third-party liability claims eligible for payment under paragraph (b) of this section may exceed the balance of the standby trust fund and the obligation of the provider of financial assurance, the first priority for payment shall be corrective action costs necessary to protect human health and the environment. The Director shall pay third-party liability claims in the order in which the Director receives certifications under paragraph (b)(2)(i) of this section, and valid court orders under paragraph (b)(2)(ii) of this section.

(d) A governmental entity acting as guarantor under § 280.106(e), the local government guarantor without standby trust, shall make payments as directed by the Director under the circumstances described in § 280.112

[53 FR 43370, Oct. 26, 1988, as amended at 58 FR 9051, Feb. 18, 1993]

280.113 Release from the requirements.

An owner or operator is no longer required to maintain financial responsibility under this subpart for an underground storage tank after the tank has been properly closed or, if corrective action is required, after corrective action has been completed and the tank has been properly closed as required by 40 CFR Part 280, Subpart G.

[53 FR 43370, Oct. 26, 1988, as amended at 54 FR 47082, Nov. 9, 1989; 58 FR 9051, Feb. 18, 1993]

280.114 Bankruptcy or other incapacity of owner or operator or provider of financial assurance.

(a) Within 10 days after commencement of a voluntary or involuntary proceeding under

Title 11 (Bankruptcy), U.S. Code, naming an owner or operator as debtor, the owner or operator must notify the Director of the implementing agency by certified mail of such commencement and submit the appropriate forms listed in § 280.111(b) documenting current financial responsibility.

(b) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing financial assurance as debtor, such guarantor must notify the owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in § 280.96.

(c) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a local government owner or operator as debtor, the local government owner or operator must notify the Director of the implementing agency by certified mail of such commencement and submit the appropriate forms listed in § 280.111(b) documenting current financial responsibility.

(d) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing a local government financial assurance as debtor, such guarantor must notify the local government owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in § 280.106.

(e) An owner or operator who obtains financial assurance by a mechanism other than the financial test of self-insurance will be deemed to be without the required financial assurance in the event of a bankruptcy or incapacity of its provider of financial assurance, or a suspension or revocation of the authority of the provider of financial assurance to issue a guarantee, insurance policy, risk retention group coverage policy, surety bond, letter of credit, or state-required mechanism. The owner or operator must obtain alternate financial assurance as specified in this subpart within 30 days after receiving notice of such an event. If the owner or operator does not obtain alternate coverage within 30 days after such notification, he must notify the Director of the implementing agency.

(f) Within 30 days after receipt of notification that a state fund or other state assurance has become incapable of paying for assured corrective action or third-party compensation costs, the owner or operator must obtain alternate financial assurance.
[53 FR 43370, Oct. 26, 1988, as amended at 58 FR 9051, Feb. 18, 1993]

280.115 Replenishment of guaranties, letters of credit, or surety bonds.

(a) If at any time after a standby trust is funded upon the instruction of the Director of the implementing agency with funds drawn from a guarantor, local government guarantee with standby trust, letter of credit, or surety bond, and the amount in the standby trust is reduced below the full amount of coverage required, the owner or operator shall by the anniversary date of the financial mechanism from which the funds were drawn:

(1) Replenish the value of financial assurance to equal the full amount of coverage required, or

(2) Acquire another financial assurance mechanism for the amount by which funds in the standby trust have been reduced.

(b) For purposes of this section, the full amount of coverage required is the amount of coverage to be provided by § 280.93 of this subpart. If a combination of mechanisms was used to provide the assurance funds which were drawn upon, replenishment shall occur by the earliest anniversary date among the mechanisms.

[53 FR 43370, Oct. 26, 1988, as amended at 58 FR 9051, Feb. 18, 1993]

280.116 Suspension of enforcement. [Reserved]

Appendix I—Notification for Underground Storage Tanks (Form)

Environmental Protection Agency

Part 280, Appendix I

DC. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)		Tank No. _____					
1. Status of Tank (Mark only one)	Currently in Use	<input type="checkbox"/>					
	Temporarily Out of Use <small>(Please specify in the remarks.)</small>	<input type="checkbox"/>					
2. Date of Installation (no. year)	Permanently Out of Use <small>(Please specify in the remarks.)</small>	<input type="checkbox"/>					
	Amendment of Information	<input type="checkbox"/>					
3. Estimated Total Capacity (gallons)							
4. Material of Construction (Mark all that apply)	Asphalt Coated or Bare Steel	<input type="checkbox"/>					
	Cathodically Protected Steel	<input type="checkbox"/>					
	Epoxy Coated Steel	<input type="checkbox"/>					
	Composite (Steel with Fiberglass)	<input type="checkbox"/>					
	Fiberglass Reinforced Plastic	<input type="checkbox"/>					
	Lined Interior	<input type="checkbox"/>					
	Double Walled	<input type="checkbox"/>					
	Polyethylene Tank Jacket	<input type="checkbox"/>					
	Concrete	<input type="checkbox"/>					
	Excavation Liner	<input type="checkbox"/>					
Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other, Please specify							
5. Piping (Material) (Mark all that apply)	Has tank been repaired?	<input type="checkbox"/>					
	Bare Steel	<input type="checkbox"/>					
	Galvanized Steel	<input type="checkbox"/>					
	Fiberglass Reinforced Plastic	<input type="checkbox"/>					
	Copper	<input type="checkbox"/>					
	Cathodically Protected	<input type="checkbox"/>					
	Double Walled	<input type="checkbox"/>					
	Secondary Containment	<input type="checkbox"/>					
	Unknown	<input type="checkbox"/>					
	Other, Please specify						
6. Piping (Type) (Mark all that apply)	Suction: no valve at tank	<input type="checkbox"/>					
	Suction: valve at tank	<input type="checkbox"/>					
	Pressure	<input type="checkbox"/>					
	Gravity Feed	<input type="checkbox"/>					
Has piping been repaired?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Tank Identification Number	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____
7. Substance Currently or Last Stored in Greatest Quantity by Volume	Gasoline	<input type="checkbox"/>				
	Diesel	<input type="checkbox"/>				
	Gasohol	<input type="checkbox"/>				
	Kerosene	<input type="checkbox"/>				
	Heating Oil	<input type="checkbox"/>				
	Used Oil	<input type="checkbox"/>				
	Other, Please specify					
	Hazardous Substance	<input type="checkbox"/>				
	CERCLA name and/or CAS number					
	Mixture of Substances	<input type="checkbox"/>				
Please specify						
X. TANKS OUT OF USE, OR CHANGE IN SERVICE						
1. Closing of Tank	A. Estimated date last used (no./day/year)					
	B. Estimate date tank closed (no./day/year)					
	C. Tank was removed from ground	<input type="checkbox"/>				
	D. Tank was closed in ground	<input type="checkbox"/>				
	E. Tank filled with inert material	<input type="checkbox"/>				
	Describe					
2. Site Assessment Completed	F. Change in service	<input type="checkbox"/>				
	Evidence of a leak detected	<input type="checkbox"/>				

Environmental Protection Agency

Part 280, Appendix II

Tank Identification Number	XI. CERTIFICATION OF COMPLIANCE (COMPLETE FOR ALL NEW AND UPGRADED TANKS AT THIS LOCATION)											
	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____
1. Installation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A. Installer certified by tank and piping manufacturers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Installer certified or licensed by the implementing agency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Installation inspected by a registered engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Installation inspected and approved by implementing agency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Manufacturer's installation checklists have been completed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Another method allowed by State agency. Please specify.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Release Detection (Mark all that apply)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A. Manual tank gauging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Tank tightness testing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Inventory controls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Automatic tank gauging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Vapor monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Groundwater monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Interstitial monitoring double walled tank/teeing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Interstitial monitoring/secondary containment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Automatic line leak detectors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Line tightness testing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. Other method allowed by implementing Agency. Please specify.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Spill and Overfill Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A. Overfill device installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Spill device installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DATE: I certify the information concerning installation that is provided in section XI is true to the best of my belief and knowledge.

Installer: _____ Name _____ Signature _____ Date _____
 Position _____ Company _____

- Appendix II—List of Agencies Designated To Receive Notifications**
- Alabama (EPA Form), Alabama Department of Environmental Management, Ground Water Section/Water Division, 1751 Congressman W.L. Dickinson Drive, Montgomery, Alabama 36130, 205/271-7823
 - Alaska (EPA Form), Department of Environmental Conservation, Box 0, Juneau, Alaska 99811-1800, 907/465-2653
 - American Samoa (EPA Form), Executive Secretary, Environmental Quality Commission, Office of the Governor, American Samoan Government, Pago Pago, American Samoa 96799; Attention: UST Notification
 - Arizona (EPA Form), Attention: UST Coordinator, Arizona Department of Environmental Quality, Environmental Health Services, 2005 N. Central, Phoenix, Arizona 85004
 - Arkansas (EPA Form), Arkansas Department of Pollution Control and Ecology, P.O. Box 9583, Little Rock, Arkansas 72219, 501/562-7444
 - California (State Form), Executive Director, State Water Resources Control Board, P.O. Box 100, Sacramento, California 95801, 916/445-1333
 - Colorado (EPA Form), Section Chief, Colorado Department of Health, Waste Management Division, Underground Tank Program, 4210 East 11th Avenue, Denver, Colorado 80220, 303/320-8333
 - Connecticut (State Form), Hazardous Materials Management Unit, Department of Environmental Protection, State Office Building, 165 Capitol Avenue, Hartford, Connecticut 06106
 - Delaware (State Form), Division of Air and Waste Management, Department of Natural Resources and Environmental Control, P.O. Box 1401, 89 Kings Highway, Dover, Delaware 19903, 302/726-5409
 - District of Columbia (EPA Form), Attention: UST Notification Form, Department of Consumer and Regulatory Affairs, Pesticides and Hazardous Waste Management Branch, Room 114, 5010

- Overlook Avenue SW., Washington, DC 20032
- Florida (State Form), Florida Department of Environmental Regulation, Solid Waste Section, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32399, 904/487-4398
- Georgia (EPA Form), Georgia Department of Natural Resources, Environmental Protection Division, Underground Storage Tank Program, 3420 Norman Berry Drive, 7th Floor, Hapeville, Georgia 30354, 404/656-7404
- Guam (State Form), Administrator, Guam Environmental Protection Agency, P.O. Box 2999, Agaña, Guam 96910, Overseas Operator (Commercial call 646-8863)
- Hawaii (EPA Form), Administrator, Hazardous Waste Program, 645 Halekauwila Street, Honolulu, Hawaii 96813, 808/548-2270
- Idaho (EPA Form), Underground Storage Tank Coordinator, Water Quality Bureau, Division of Environmental Quality, Idaho Department of Health and Welfare, 450 W. State Street, Boise, Idaho 83720, 208/334-4251
- Illinois (EPA Form), Underground Storage Tank Coordinator, Division of Fire Prevention, Office of State Fire Marshal, 3150 Executive Park Drive, Springfield, Illinois 62703-4599
- Indiana (EPA Form), Underground Storage Tank Program, Office of Environmental Response, Indiana Department of Environmental Management, 105 South Meridian Street, Indianapolis, Indiana 46225
- Iowa (State Form), UST Coordinator, Iowa Department of Natural Resources, Henry A. Wallace Building, 900 East Grand, Des Moines, Iowa 50219, 512/281-8133
- Kansas (EPA Form), Kansas Department of Health and Environment, Forbes Field, Building 740, Topeka, Kansas 66620, 913/296-1594
- Kentucky (State Form), Department of Environmental Protection, Hazardous Waste Branch, Fort Boone Plaza, Building #2, 18 Reilly Road, Frankfort, Kentucky 40601, 501/564-6716
- Louisiana (State Form), Secretary, Louisiana Department of Environmental Quality, P.O.

Environmental Protection Agency

Part 280, / ppendix II

Box 44066, Baton Rouge, Louisiana 70804,
501/342-1265

Maine (State Form), Attention: Underground
Tanks Program, Bureau of Oil and
Hazardous Material Control, Department of
Environmental Protection, State
House—Station 17, Augusta, Maine 04333
Maryland (EPA Form), Science and Health
Advisory Group, Office of Environmental
Programs, 201 West Preston Street,
Baltimore, Maryland 21201

Massachusetts (EPA Form), UST Registry,
Department of Public Safety, 1010
Commonwealth Avenue, Boston,
Massachusetts 02215, 617/566-4500

Michigan (EPA Form), Michigan Department of
State Police, Fire Marshal Division, General
Office Building, 7150 Harris Drive,
Lansing, Michigan 48913

Minnesota (State Form), Underground Storage
Tank Program, Division of Solid and
Hazardous Wastes, Minnesota Pollution
Control Agency, 520 West Lafayette Road,
St. Paul, Minnesota 55155

Mississippi (State Form), Department of Natural
Resources, Bureau of Pollution Control,
Underground Storage Tank Section, P.O.
Box 10385, Jackson, Mississippi 39209,
601/961-5171

Missouri (EPA Form), UST Coordinator,
Missouri Department of Natural Resources,
P.O. Box 176, Jefferson City, Missouri
65102, 314/751-7428

Montana (EPA Form), Solid and Hazardous
Waste Bureau, Department of Health and
Environmental Science, Cogswell Bldg.,
Room B-201, Helena, Montana 59620

Nebraska (EPA Form), Nebraska State Fire
Marshal, P.O. Box 94677, Lincoln,
Nebraska 68509-4677, 402/471-9465

Nevada (EPA Form), Attention: UST
Coordinator, Division of Environmental
Protection, Department of Conservation and
Natural Resources, Capitol Complex 201 S.
Fall Street, Carson City, Nevada 89710,
800/992-0900, Ext. 4670, 702/885-4670

New Hampshire (EPA Form), NH Dept. of
Environmental Services, Water Supply and
Pollution Control Division, Hazen Drive,
P.O. Box 95, Concord, New Hampshire
03301, Attention: UST Registration

New Jersey (State Form), Underground Storage
Tank Coordinator, Department of
Environmental Protection, Division of
Water Resources (CN-029), Trenton, New
Jersey 08625, 609/292-0424

New Mexico (EPA Form), New Mexico
Environmental Improvement Division,
Groundwater/Hazardous Waste Bureau,
P.O. Box 968, Santa Fe, New Mexico 37504,
505/827-2933

New York (EPA Form), Bulk Storage Section,
Division of Water, Department of
Environmental Conservation, 50 Wolf
Road, Room 326, Albany, New York
12233-0001, 518/457-4351

North Carolina (EPA Form), Division of
Environmental Management,
Ground-Water Operations Branch,
Department of Natural Resources and
Community Development, P.O. Box 27687,
Raleigh, North Carolina 27611,
919/733-3221

North Dakota (State Form), Division of
Hazardous Management and Special
Studies, North Dakota Department of
Health, Box 5520, Bismarck, North Dakota
58502-5520

Northern Mariana Islands (EPA Form), Chief,
Division of Environmental Quality, P.O.
Box 1304, Commonwealth of Northern
Mariana Islands, Saipan, CM 96950, Cable
Address: Gov. NMI Saipan, Overseas
Operator: 6984

Ohio (State Form), State Fire Marshal's Office,
Department of Commerce, 8895 E. Main
Street, Reynoldsburg, Ohio 43068, State
Hotline: 800/282-1927 Oklahoma (EPA
Form), Underground Storage Tank
Program, Oklahoma Corporation Comm.,
Jim Thorpe Building, Oklahoma City,
Oklahoma 73105

Oregon (State Form), Underground Storage Tank
Program, Hazardous and Solid Waste
Division, Department of Environmental
Quality, 811 S.W. Sixth Avenue, Portland,
Oregon 98204, 503/229-5788

Pennsylvania (EPA Form), PA Department of
Environmental Resources, Bureau of Water
Quality Management, Ground Water Unit,
9th Floor Fulton Building, P.O. Box 2063,
Harrisburg, Pennsylvania 17120

Puerto Rico (EPA Form), Director, Water Quality
Control Area, Environ- mental Quality
Board, Common- wealth of Puerto Rico,
Santurce, Puerto Rico, 809/723-0717
Rhode Island (EPA Form), UST Registration,
Department of Environmental Management,
83 Park Street, Providence, Rhode Island
02903, 401/277-2234

South Carolina (State Form), Ground-Water
Protection Division, South Carolina
Department of Health and Environmental
Control, 2600 Bull Street, Columbia, South
Carolina 29201, 803/738-5213

South Dakota (EPA Form), Office of Water
Quality, Department of Water and Natural
Resources, Joe Foss Building, Pierre, South
Dakota 57501

Tennessee (EPA Form), Tennessee Department
of Health and Environment, Division of
Superfund Underground Storage Tank
Section, 150 Ninth Avenue, North,
Nashville, Tennessee 37219-5404,
615/741-0690

Texas (EPA Form), Underground Storage Tank
Program, Texas Water Commission, P.O.
Box 13087, Austin, Texas 78711

Utah (EPA Form), Division of Environmental
Health, P.O. Box 45500, Salt Lake City,
Utah 84145-0500

Vermont (State Form), Underground Storage
Tank Program, Vermont AEC/Waste
Management Division, State Office
Building, Montpelier, Vermont 05602,
802/828-3395

Virginia (EPA Form), Virginia Water Control
Board, P.O. Box 11143, Richmond, Virginia
23230-1143, 804/257-6685

Virgin Islands (EPA Form), 205(J) Coordinator,
Division of Natural Resources
Management, 14 F Building 111, Watgut
Homes, Christianstead, St. Croix, Virgin
Islands 00820

Washington (State Form), Underground Storage
Tank Notification, Solid and Hazardous
Waste Program, Department of Ecology,
M/S P.V.-11, Olympia, Washington
98504-8711, 206/459-6316

West Virginia (EPA Form), Attention: UST
Notification, Solid and Hazardous Waste,
Ground Water Branch, West Virginia
Department of Natural Resources, 1201

Greenbriar Street, Charleston, West
Virginia 25311

Wisconsin (State Form), Bureau of Petroleum
Inspection, P.O. Box 7969, Madison,
Wisconsin 53707, 608/266-7605

Wyoming (EPA Form), Water Quality Division,
Department of Environmental Quality,
Herschler Building, 4th Floor West, 122
West 25th Street, Cheyenne, Wyoming
82002, 307/777-7781.

Appendix III—Statement for
Shipping Tickets and Invoices

Note: A Federal law (the Resource Conservation and
Recovery Act (RCRA), as amended (Pub. L. 98-616))
requires owners of certain underground storage tanks to
notify designated State or local agencies by May 8, 1986,
of the existence of their tanks. Notifications for tanks
brought into use after May 8, 1986, must be made within
30 days. Consult EPA's regulations, issued on November
8, 1985 (40 CFR, Part 280) to determine if you are affected
by this law.

APPENDIX C

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
UNDERGROUND STORAGE TANK REGULATIONS
CHAPTER 1200-1-15**

**RULES
OF
THE DEPARTMENT OF HEALTH AND ENVIRONMENT
DIVISION OF UNDERGROUND STORAGE TANKS**

**CHAPTER 1200—1—15
UNDERGROUND STORAGE TANK PROGRAM**

TABLE OF CONTENTS

1200—1—15—.01	Program Scope and Minimum Requirements for Tanks	1200—1—15—.07	Out-of-Service UST Systems and Closure
1200—1—15—.02	UST Systems: Design, Construction, Installation and Notification	1200—1—15—.08	Financial Responsibility
1200—1—15—.03	General Operating Requirements	1200—1—15—.09	Administrative Guidelines and Procedures for the Tennessee Petroleum Underground Storage Tank Fund
1200—1—15—.04	Release Detection	1200—1—15—.10	Fee Collection and Certificate Issuance Regulations
1200—1—15—.05	Release Reporting, Investigation, and Confirmation	1200—1—15—.11	Underground Storage Tank Program
1200—1—15—.06	Release Response and Corrective Action for UST Systems Containing Petroleum		

1200—1—15—.01 PROGRAM SCOPE AND MINIMUM REQUIREMENTS FOR TANKS.

(1) Applicability.

- (a) The requirements of this chapter apply to all owners and operators of an UST system as defined in rule 1200—1—15—.01(3) except as otherwise provided in subparagraph (b) and (c) of rule 1200—1—15—.01(1).

Any new UST systems listed in subparagraph (b) of rule 1200—1—15—.01(1) must meet the requirements of rule 1200—1—15—.01(2).

- (b) Deferrals. Rules 1200—1—15—.02 through 1200—1—15—.05 and 1200—1—15—.07 through 1200—1—15—.11 do not apply to any of the following types of UST systems:

1. Wastewater treatment tank systems;
2. Any UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 USC 2011 and following);
3. Any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR 50 Appendix A;
4. Airport hydrant fuel distribution systems; and
5. UST systems with field-constructed tanks.
6. Equipment or machinery that contains petroleum for operational purposes such as hydraulic lift tanks and electrical equipment tanks.
7. Any UST system whose capacity is 110 gallons or less.
8. Any UST system that contains a de minimis concentration of petroleum.
9. Any emergency spill or overflow containment UST system that is expeditiously emptied after use.

- (c) Deferrals. Rule 1200—1—15—.04 does not apply to any UST system that stores fuel solely for use by emergency power generators.

(2) Minimum Requirements for Tanks.

- (a) No person may install an UST system for the purpose of storing petroleum unless the UST system (whether of single or double-wall construction):

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.01, continued)

1. Will prevent releases due to corrosion or structural failure for the operational life of the UST system;
 2. Is cathodically protected against corrosion, constructed of noncorrodible material, steel clad with a noncorrodible material, or designed in a manner to prevent the release or threatened release of any petroleum; and
 3. Is constructed or lined with material that is compatible with the petroleum.
- (b) Notwithstanding subparagraph (a) of this paragraph, an UST system without corrosion protection may be installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life. Owners and operators must maintain records that demonstrate compliance with the requirements of this subparagraph for the remaining life of the tank.

[Note: The National Association of Corrosion Engineers Standard RP—02—85 (March 1985) *Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems*, may be referred to for additional information.]

(3) Definitions.

- (a) "Aboveground release" means any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the above-ground portion of an UST system and aboveground releases associated with overfills and transfer operations as the petroleum moves to or from an UST system.
- (b) "Ancillary equipment" means any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of petroleum to and from an UST.
- (c) "Asymptotic level" means a graphical representation of the level of contaminant remaining in soil and/or ground water, where the y-axis of the graph indicates contaminant level and the x-axis represents length of treatment. Samples of the soil and/or ground water shall be taken quarterly. After the slope of the graph approximates the slope of the x-axis, using the data from four consecutive quarters, an asymptotic level of treatment would have been reached; provided that the contaminant treatment system has been properly designed and operated.
- (d) "Bedrock" means any rock, solid and continuous, which is exposed at the surface of the earth or overlain by unconsolidated material.
- (e) "Belowground release" means any release to the subsurface of the land or to ground water. This includes, but is not limited to, releases from the belowground portions of an underground storage tank system and belowground releases associated with overfills and transfer operations as the petroleum moves to or from an underground storage tank.
- (f) "Beneath the surface of the ground" means beneath the ground surface or otherwise covered with earthen materials.
- (g) "Cathodic protection" is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current.

(Rule 1200—1—15—.01, continued)

- (h) "Cathodic protection tester" means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.
- (i) "CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.
- (j) "Compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the UST.
- (k) "Connected piping" means all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which petroleum flows. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them.
- (l) "Consumption" with respect to heating oil means consumed on the premises where stored.
- (m) "Corrosion expert" means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must submit documentation for review by the Division that they have accreditation or certification as a corrosion specialist or senior corrosion technologist by the National Association of Corrosion Engineers or have education and a minimum of 4 years responsible charge work experience in the corrosion field. If it is determined by the Division that a person has sufficient experience and education to be qualified to take responsible charge in corrosion control of buried or submerged metal piping systems and metal tanks, then that person shall be classified by the Division as a Corrosion Expert for the purposes of this rule.
- (n) "Dielectric material" means a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the UST system (e.g., tank from piping).
- (o) "Division" means the Division designated by the Commissioner of the Department of Health and Environment as the agency to implement the Underground Storage Tank Program in Tennessee.
- (p) "Drinking water supply" means any aquifer or water source whose chemical characteristics meet the primary and secondary drinking water standards as defined under rule 1200—5—1 and provides a yield of at least one-half gallon per minute. This shall also include any water supply used for drinking by the citizens of the state.
- (q) "Electrical equipment" means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable.
- (r) "Excavation zone" means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation.
- (s) "Existing tank system" means a tank system used to contain an accumulation of petroleum or for which installation had commenced on or before December 22, 1988. Installation is considered to have commenced if:

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.01, continued)

1. the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if,
 2. (i) either a continuous on-site physical construction or installation program has begun; or,
 - (ii) the owner or operator has entered into contractual obligations (which cannot be cancelled or modified without substantial loss) for physical construction at the site or installation of the tank system to be completed within a reasonable time.
- (t) "Farm tank" is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations.
- (u) "Flow-through process tank" means a tank whose principle use is not for storage but is primarily used in the manufacture of a product or in a treatment process. Flow-through process tanks form an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.
- (v) "Free product" refers to petroleum that is present as a nonaqueous phase liquid (e.g., liquid not dissolved in water.)
- (w) "Gathering lines" means any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations.
- (x) "Ground water" means water below the land surface in a zone of saturation.
- (y) "Heating oil" means petroleum that is No. 1, No. 2, No. 4—light, No. 4—heavy, No. 5—light, No. 5—heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.
- (z) "Hydraulic lift tank" means a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.
- (aa) "Liquid trap" means sumps, well cellars, and other traps used in association with oil and gas production, gathering, and extraction operations (including gas production plants), for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream.
- (bb) "Maintenance" means the normal operational upkeep to prevent an underground storage tank system from releasing petroleum.
- (cc) "Motor fuel" means petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasohol, and is typically used in the operation of a motor engine.
- (dd) "New tank system" means a tank system that will be used to contain an accumulation of petroleum and for which installation has commenced after December 22, 1988. (See also "Existing Tank System").
- (ee) "Noncommercial purposes" with respect to motor fuel means not for resale.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.01, continued)

- (ff) "On the premises where stored" with respect to heating oil means UST systems located on the same property where the stored heating oil is used.
- (gg) "Operational life" refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed under rule 1200—1—15—.07.
- (hh) "Operator" means any person in control of, or having responsibility for, the daily operation of the UST system.
- (ii) "Overfill release" is a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the petroleum to the environment.
- (jj) "Owner" means: (a) in the case of an UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use, or dispensing of petroleum; and (b) in the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned such UST immediately before the discontinuation of its use.
- (kk) "Person" means any and all persons, including individuals, firms, partnerships, associations, public or private institutions, state and federal agencies, municipalities or political subdivisions, or officers thereof, departments, agencies or instrumentalities, or public or private corporations or officers thereof, organized or existing under the laws of this state or any other state or country.
- (ll) "Petroleum" means crude oil or any fraction thereof that is liquid at standard temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).
- (mm) "Petroleum UST system" means an underground storage tank system that contains petroleum or a mixture of petroleum with de minimis quantities of other hazardous substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.
- (nn) "Pipe" or "Piping" means a hollow cylinder or tubular conduit that is constructed of non-earthen materials.
- (oo) "Pipeline facilities (including gathering lines)" are new and existing pipe rights-of-way and any associated equipment, facilities, or buildings.
- (pp) "Release" means any spilling, overfilling, leaking, emitting, discharging, escaping, leaching or disposing of a petroleum substance from an UST including its associated piping, into ground water, surface water, or subsurface soils.
- (qq) "Release detection" means determining whether a release of petroleum has occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it.
- (rr) "Repair" means to restore a tank or UST system component that has caused a release of petroleum from the UST system.
- (ss) "Residential tank" is a tank located on property used primarily for dwelling purposes.
- (tt) "SARA" means the Superfund Amendments and Reauthorization Act of 1986.

ROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

.00—1—15—.01, continued)

- (uu) "Septic tank" is a watertight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.
- (vv) "Storm-water or wastewater collection system" means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.
- (ww) "Surface impoundment" is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well.
- (xx) "Tank" is a stationary device designed to contain an accumulation of petroleum and constructed of non-earthen materials (e.g., wood, concrete, steel, fiberglass) that provide structural support.
- (yy) "Underground area" means an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.
- (zz) "Underground release" means any belowground release.
- (aaa) "Underground storage tank" or "UST" means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of petroleum, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any:
1. Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for non-commercial purposes;
 2. Tank used for storing heating oil for consumption on the premises where stored;
 3. Septic tank;
 4. Pipeline facility (including gathering lines) regulated under:
 - (i) The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.), or
 - (ii) The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.), or
 - (iii) Which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in paragraph (d) 1. or (d) 2. of this definition;
 5. Surface impoundment, pit, pond, or lagoon;
 6. Storm-water or wastewater collection system;
 7. Flow-through process tank;

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.01, continued)

8. Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or
9. Storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

The term "underground storage tank" or "UST" does not include any pipes connected to any tank which is described in parts 1. through 9. of this subparagraph.

- (bbb) "Upgrade" means the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of petroleum.
- (ccc) "UST system" or "Tank system" means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.
- (ddd) "Wastewater treatment tank" means a tank that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods.

Authority: T.C.A. §§68—53—101 et. seq., 68—53—107, 68—53—113 and 4—5—201 et. seq. Administrative History: Original rule filed March 1, 1990; effective April 15, 1990. Amendment filed July 3, 1991; effective August 17, 1991

1200—1—15—.02 UST SYSTEMS: DESIGN, CONSTRUCTION, INSTALLATION AND NOTIFICATION.

- (1) Performance standards for new UST systems.

In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST system is used to store petroleum, all owners and/or operators of new UST systems must meet the following requirements.

- (a) Tanks. Each tank must be properly designed and constructed, and any portion underground that routinely contains petroleum must be protected from corrosion as specified below:

1. The tank is constructed of fiberglass-reinforced plastic:

[Note: The following publications provide information on this subject: Underwriters Laboratories Standard 1316 (First Edition, Revised 1987), *Standard for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products*; Underwriter's Laboratories of Canada CAN4-S615-M 83 (First Edition, February 1983), *Standard for Reinforced Plastic Underground Tanks for Petroleum Products*; or American Society of Testing and Materials Standard D4021-86 (1986 Edition), *Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks*.]

2. The tank is constructed of steel and cathodically protected in the following manner:

- (i) The tank is coated with a suitable dielectric material;
- (ii) Field-installed cathodic protection systems are designed by a corrosion expert;
- (iii) Impressed current systems are designed to allow determination of current operating status as required in rule 1200—1—15—.03(2)(c); and

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.02, continued)

- (iv) Cathodic protection systems are operated and maintained in accordance with rule 1200—1—15—.03(2) or a method determined by the Division to provide equivalent protection against corrosion.

[Note: The following publications provide information on this subject: Steel Tank Institute (May 1987 Edition) *Specification for STI-P3 System of External Corrosion Protection of Underground Steel Storage Tanks*; Underwriters Laboratories Standard 1746, (First Edition, Proposed November 1987), *Corrosion Protection Systems for Underground Storage Tanks*; Underwriters Laboratories of Canada CAN4-S603-M85, (1985 Edition), *Standard for Steel Underground Tanks for Flammable and Combustible Liquids*, and CAN4-603.1-M85, (1985 Edition), *Standard for Galvanic Corrosion Protection Systems for Underground Tanks for Flammable and Combustible Liquids*, and CAN4-S631-M84, (1984 Edition), *Isolating Bushings for Steel Underground Tanks Protected with Coatings and Galvanic Systems*; or National Association of Corrosion Engineers Standard RP-02-85 (March 1985), *Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems*, and Underwriters Laboratories Standard 58 (Eighth Edition, 1986), *Standard for Steel Underground Tanks for Flammable and Combustible Liquids*.]

3. The tank is constructed of a steel-fiberglass-reinforced-plastic composite:

[Note: The following publications provide information on this subject: Underwriters Laboratories Standard 1746 (First Edition, Proposed November 1987), *Corrosion Protection Systems for Underground Storage Tanks*, or the Association for Composite Tanks ACT-100 (March 1988 Revision), *Specification for the Fabrication of FRP Clad Underground Storage Tanks*.]

4. The tank is constructed of metal without additional corrosion protection measures provided that:

- (i) The tank is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operational life; and
- (ii) Owners and/or operators maintain records that demonstrate compliance with the requirements of subpart (a)4.(i) of this paragraph for the remaining life of the tank; or

5. The tank construction and corrosion protection are determined by the Division to be designed to prevent the release or threatened release of any stored petroleum in a manner that is no less protective of human health and the environment than parts (a)1. through 4. of this paragraph.

- (b) Piping. The piping that routinely contains petroleum and is in contact with the ground must be properly designed, constructed, and protected from corrosion as specified below:

1. The piping is constructed of fiberglass-reinforced plastic; or

[Note: The following publications provide information on this subject: Underwriters Laboratories Subject 971, *UL Listed Non-Metal Pipe*; Underwriters Laboratories Standard 567 (Sixth Edition, 1989), *Pipe Connectors for Flammable and Combustible and LP Gas*; Underwriters Laboratories of Canada Guide ULC-107C (1984 Edition), *Glass Fiber Reinforced Plastic Pipe and Fittings for Flammable Liquids*; and Underwriters Laboratories of Canada Standard CAN4-S633-M84 (First Edition, June 1984), *Flexible Underground Hose Connectors for Flammable and Combustion Liquids*.]

2. The piping is constructed of steel and cathodically protected in the following manner:

- (i) The piping is coated with a suitable dielectric material;

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.02, continued)

- (ii) Field-installed cathodic protection systems are designed by a corrosion expert;
- (iii) Impressed current systems are designed to allow determination of current operating status as required in rule 1200—1—15—.03(2)(c); and
- (iv) Cathodic protection systems are operated and maintained in accordance with rule 1200—1—15—.03(2) or in a manner determined by the Division to provide equivalent protection against corrosion.

[Note: The following publications provide information on this subject: National Fire Protection Association Standard 30 (1987 Edition), *Flammable and Combustible Liquids Code*; American Petroleum Institute Publication 1615 (Fourth Edition, November 1987), *Installation of Underground Petroleum Storage Systems*; American Petroleum Institute Publication 1632 (First Edition, 1983), *Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems*; and National Association of Corrosion Engineers Standard RP-01-69 (1983 Revision), *Control of External Corrosion on Submerged Metallic Piping Systems*.]

- 3. The piping is constructed of metal without additional corrosion protection measures provided that:
 - (i) The piping is installed at a site that is determined by a corrosion expert to not be corrosive enough to cause it to have a release due to corrosion during its operational life; and
 - (ii) Owners and/or operators maintain records that demonstrate compliance with the requirements of subpart (b)3.(i) of rule 1200—1—15—.02(1) for the remaining life of the piping; or

[Note: National Fire Protection Association Standard 30 (1987 Edition), *Flammable and Combustible Liquids Code*; and National Association of Corrosion Engineers Standard RP-01-69 (1983 Revision), *Control of External Corrosion on Submerged Metallic Piping Systems*, provide information on this subject.

- 4. The piping construction and corrosion protection are determined by the Division to be designed to prevent the release or threatened release of any stored petroleum in a manner that is no less protective of human health and the environment than the requirements in parts (b)1. through 3. of rule 1200—1—15—.02(1).

(c) Spill and overfill prevention equipment.

- 1. Except as provided in part (c)2. of rule 1200—1—15—.02(1), to prevent spilling and overfilling associated with petroleum transfer to the UST system, owners and/or operators must use the following spill and overfill prevention equipment:
 - (i) Spill prevention equipment that will prevent release of petroleum to the environment when the transfer hose is detached from the fill pipe (for example, a spill catchment basin); and
 - (ii) Overfill prevention equipment that will:
 - (I) Automatically shut off flow into the tank when the tank is no more than 95 percent full; or
 - (II) Alert the transfer operator when the tank is no more than 90 percent full by restricting the flow into the tank or triggering a high-level alarm.
 - (III) Restrict flow 30 minutes prior to overfilling, alert the operator with a high level alarm one minute before overfilling, or automatically shut off flow into the tanks so that none of the fittings located on top of the tank are exposed to product due to overfilling.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.02, continued)

2. Owners and/or operators are not required to use the spill and overfill prevention equipment specified in part (c)1. of rule 1200—1—15—.02(1) if:

- (i) Alternative equipment is used that is determined by the Division to be no less protective of human health and the environment than the equipment specified in subparagraph (c)1.(i) or (ii) of rule 1200—1—15—.02(1); or
- (ii) The UST system is filled by transfers of no more than 25 gallons at one time.

(d) Installation.

1. All tanks and piping must be installed in accordance with the manufacturer's installation instructions; and
2. After installation has been completed and before the system is placed into operation, a tank tightness test as specified in rule 1200—1—15—.04(3)(c) and a line tightness test as specified in rule 1200—1—15—.04(4)(b) must be conducted. The tank tightness test and line tightness test must indicate the tank system will not leak prior to placing the tank system into operation.

[Note: Tank and piping system installation practices and procedures described in the following publications provide information on this subject: American Petroleum Institute Publication 1615 (Fourth Edition, November 1987), *Installation of Underground Petroleum Storage System*; Petroleum Equipment Institute Publication RP100 (1987 Edition), *Recommended Practices for Installation of Underground Liquid Storage Systems*; or American National Standards Institute Standard B31.3 (1987), *Petroleum Refinery Piping*, and American National Standards Institute Standard B31.4 (1989), *Liquid Petroleum Transportation Piping System*.]

- (e) Certification of installation. All owners and/or operators must ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with subparagraph (d) of rule 1200—1—15—.02(1) by providing a certification of compliance on the UST notification form in accordance with rule 1200—1—15—.02(3).
 1. The installer has been certified by the tank and piping manufacturers; or
 2. The installation has been inspected and certified by a registered professional engineer with education and experience in UST system installation; or
 3. The installation has been inspected and approved by the Division; or
 4. All work listed in the manufacturer's installation checklists has been completed; or
 5. The owner and operator have complied with another method for ensuring compliance with paragraph (d) of rule 1200—1—15—.02(1) that is determined by the Division to be no less protective of human health and the environment.

(2) Upgrading of existing UST systems.

- (a) Alternatives allowed. Not later than December 22, 1998, all existing UST systems must comply with one of the following requirements:
 1. New UST system performance standards under rule 1200—1—15—.02(1);
 2. The upgrading requirements in subparagraphs (b) through (d) of this paragraph; or

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.02, continued)

3. Closure requirements under rule 1200—1—15—.07, including applicable requirements for corrective action under rule 1200—1—15—.06.

(b) Tank upgrading requirements. Steel tanks must be upgraded to meet one of the following requirements;

1. Interior lining. A tank may be upgraded by internal lining if:

- (i) The lining is installed in accordance with the requirements of rule 1200—1—15—.03(4) and at least the following procedures and practices:

- (I) The storage tank lining material must be compatible with the product to be stored;

- (II) The tank shell must be structurally sound prior to lining;

- (III) Lining manufacturers directions are followed during installation of lining; and

- (IV) After the tank is lined and before the tank is returned to service, the tank must be tank tightness tested according to rule 1200—1—15—.04(3)(c); and

- (ii) Within 10 years after lining, and every 5 years thereafter, the lined tank is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications.

2. Cathodic protection. A tank may be upgraded by cathodic protection if the cathodic protection system meets the requirements of rule 1200—1—15—.02(1)(a)2.(ii), (iii), and (iv) and the integrity of the tank is ensured using one of the following methods:

- (i) The tank is internally inspected and assessed to ensure that the tank is structurally sound and free of corrosion holes prior to installing the cathodic protection system; or

- (ii) The tank has been installed for less than 10 years and is monitored monthly for releases in accordance with rule 1200—1—15—.04(3)(d) through (h); or

- (iii) The tank has been installed for less than 10 years and is assessed for corrosion holes by conducting two (2) tightness tests that meet the requirements of rule 1200—1—15—.04(3)(c). The first tightness test must be conducted prior to installing the cathodic protection system. The second tightness test must be conducted between three (3) and six (6) months following the first operation of the cathodic protection system; or

- (iv) The tank is assessed for corrosion holes by a method that is determined by the Division to prevent releases in a manner that is no less protective of human health and the environment than subparts (b)2.(i) through (iii) of this paragraph.

3. Internal lining combined with cathodic protection. A tank may be upgraded by both internal lining and cathodic protection if:

- (i) The lining is installed in accordance with the requirements of rule 1200—1—15—.03(4) and rule 1200—1—15—.02(2)(b)1.(i), and

- (ii) The cathodic protection system meets the requirements of rule 1200—1—15—.02(1)(a)2.(ii), (iii), and (iv).

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.02, continued)

[Note: The following publications provide information on this subject: American Petroleum Institute Publication 1631 (Second Edition, December 1987), *Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks*; National Leak Prevention Association Standard 631 (Second Edition, September 1988), *Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection*; National Association of Corrosion Engineers Standard RP-02-85 (March 1985), *Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems*; and American Petroleum Institute Publication 1632 (First Edition, 1983), *Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems*.]

- (c) Piping upgrading requirements. Metal piping that routinely contains petroleum and is in contact with the ground must be cathodically protected and meet the requirements of rule 1200—1—15—.02(1)(b)2.(ii), (iii), and (iv).

[Note: The publications listed in the note following rule 1200—1—15—.02(1)(b)2. provide information on this subject.]

- (d) Spill and overfill prevention equipment. To prevent spilling and overfilling associated with petroleum transfer to the UST system, all existing UST systems must comply with new UST system spill and overfill prevention equipment requirements specified in rule 1200—1—15—.02(1)(c).

(3) Notification requirements.

- (a) Any owner who brings an underground storage tank system into use after July 1, 1989, must 15 days in advance of bringing such tank into use, submit, in the form prescribed in Appendix 1 of this rule, a notice of existence of such tank system to the Division. Any owner or operator wishing to replace or upgrade an existing and properly registered UST system may do so as needed, provided that within 30 days after completion of said replacement or upgrading, he shall notify the Division of the changes made on the form prescribed in Appendix 1, indicating that it is an amendment to the existing system.

[Note: Owners and/or operators of UST systems that were in the ground on or after May 8, 1986, unless taken out of operation on or before January 1, 1974, were required to notify the designated state or local agency in accordance with the Hazardous and Solid Waste Amendments of 1984, Public Law 98-616, on a form published by EPA on November 8, 1985, (50 FR 46602) unless notice was given pursuant to section 103(c) of CERCLA. Owners and/or operators who have not complied with the notification requirements may use portions I through VI of the notification form contained in Appendix 1 of this rule.]

- (b) Owners and/or operators shall use the form in Appendix 1 of this rule to report petroleum underground storage tanks.
- (c) Owners required to submit notices under subparagraph (a) of this paragraph must provide notices to the Division for each tank they own. Owners may provide notice for several tanks using one notification form, but owners who own tanks located at more than one place of operation must file a separate notification form for each separate place of operation.
- (d) Notices required to be submitted under subparagraph (a) of rule 1200—1—15—.02(3) must provide all of the information in Sections I through VI of the prescribed form for each tank for which notice must be given. Notices for tanks installed after December 22, 1988, must also provide all of the information in Section VII of the prescribed form for each tank for which notice must be given.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.02, continued)

- (e) All owners and operators of new UST systems must certify in the notification form compliance with the following requirements:
1. Installation of tanks and piping under rule 1200—1—15—.02(1)(e);
 2. Cathodic protection of steel tanks and piping under rule 1200—1—15—.02(1)(a) and (b);
 3. Financial responsibility under rule 1200—1—15—.08; and
 4. Release detection under rule 1200—1—15—.04(2).
- (f) All owners and operators of new UST systems must ensure that the installer certifies in the notification form that the methods used to install the tanks and piping complies with the requirements in rule 1200—1—15—.02(1)(d).
- (g) Beginning October 26, 1988, any person who sells a tank intended to be used as an underground storage tank must notify the purchaser of such tank of the owner's notification obligations under subparagraph (a) of rule 1200—1—15—.02(3). The form provided in Appendix 2 may be used to comply with this requirement.
- (h) Any change in the status of the tanks at a petroleum UST facility must be reported within thirty (30) days of said change. This includes but is not limited to changes of ownership, upgrading or replacement of tanks, and changes in service. Such reports shall be made using an amended notification form. In the case of a sale of tanks, the seller must submit the amended notification form and must also inform the buyer of the notification requirement.

Authority: T.C.A. §§68—53—101 et seq., 68—53—107, 68—53—113 and 4—5—201 et seq. Administrative History: Original rule filed March 1, 1990; effective April 15, 1990. Amendment filed July 3, 1991; effective August 17, 1991.

1200—1—15—.03 GENERAL OPERATING REQUIREMENTS.

(1) Spill and overfill control.

- (a) Owners and/or operators must ensure that releases due to spilling or overfilling do not occur. The owner and/or operator must ensure that the volume available in the tank is greater than the volume of petroleum to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

[Note: The following publications provide information on this subject: National Fire Protection Association Publication 385 (1985 Edition), *Tank Vehicles for Flammable and Combustible Liquids*; American Petroleum Institute Publication 1621 (Third Edition, 1977), *Recommended Practice for Bulk Liquid Stock Control at Retail Outlets*; and National Fire Protection Association Standard 30 (1987 Edition), *Flammable and Combustible Liquids Code*.]

- (b) The owner and/or operator must report, investigate, and clean up any spills and overfills in accordance with rule 1200—1—15—.05(4).

(2) Operation and maintenance of corrosion protection.

All owners and/or operators of steel UST systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented for as long as the UST system is used to store petroleum:

- (a) All corrosion protection systems must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contains petroleum and is in contact with the ground.
- (b) All UST systems equipped with cathodic protection systems must be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:

UNDERGROUND STORAGE TANK PROGRAM

(Rule 1200—1—15—.03, continued)

1. Frequency. All cathodic protection systems must be tested within 6 months of installation and at least every 3 years thereafter;
2. The cathodic protection system must be functioning as designed and is effectively preventing corrosion; and
3. The owner and/or operator shall maintain records that demonstrate compliance with this paragraph.

[Note: National Association of Corrosion Engineers Standard RP-02-85 (March 1985 Edition), *Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems*, provides information on this subject.]

- (c) UST systems with impressed current cathodic protection systems must also be inspected every 60 days to ensure the equipment is running properly.
- (d) For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained (in accordance with rule 1200—1—15—.03(5)) to demonstrate compliance with the performance standards in rule 1200—1—15—.03(2). These records must provide the following:
 1. The results of the last three inspections required in subparagraph (c) of rule 1200—1—15—.03(2); and
 2. The results of testing from the last two inspections required in subparagraph (b) of rule 1200—1—15—.03(2).

(3) Computability.

Owners and/or operators must use an UST system made of or lined with materials that are compatible with the petroleum stored in the UST system.

[Note: The following publications provide information on storing alcohol blends: American Petroleum Institute Publication 1626 (First Edition, April 1985), *Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations*; and American Petroleum Institute Publication 1627 (First Edition, August 1986), *Storage and Handling of Gasoline-Methanol/Co-solvent Blends at Distribution Terminals and Service Stations*.]

(4) Repairs allowed.

Owners and/or operators of UST systems must ensure that repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store petroleum. The repairs must meet the following requirements:

- (a) Repairs to UST systems must be conducted so as to effectively prevent releases for the operational life of the tank system.

[Note: The following publications provide information on this subject: National Fire Protection Association Standard 30 (1987 Edition), *Flammable and Combustible Liquids Code*; American Petroleum Institute Publication 2200 (Second Edition, 1983), *Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines*; American Petroleum Institute Publication 1631 (Second Edition, December 1987), *Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks*; and National Leak Prevention Association Standard 631 (Second Edition, September 1988), *Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection*.]

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.03, continued)

- (b) Repairs to fiberglass-reinforced plastic tanks shall be made by the manufacturer's authorized representatives or in accordance with the manufacturer's specifications.
 - (c) Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced. Fiberglass pipes and fittings may be repaired in accordance with the manufacturer's specifications.
 - (d) Repaired tanks and piping must be tightness tested in accordance with rule 1200—1—15—.04(3)(c) and rule 1200—1—15—.04(4)(b) within 30 days following the date of the completion of the repair except as provided in parts (d)1. through 3. of rule 1200—1—15—.03(4):
 - 1. The repaired tank is internally inspected; or
 - 2. The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in rule 1200—1—15—.04(3)(d) through (h); or
 - 3. Another test method is used that is determined by the Division to be no less protective of human health and the environment than those listed above.
 - (e) Within 6 months following the repair of any cathodically protected UST system, the cathodic protection system must be tested in accordance with rule 1200—1—15—.03(2)(b) and (c) to ensure that it is operating properly.
 - (f) UST system owners and/or operators must maintain records of each repair for the remaining operating life of the UST system that demonstrate compliance with the requirements of rule 1200—1—15—.03(4).
- (5) Reporting and recordkeeping.

Owners and/or operators of UST systems must cooperate fully with inspections, monitoring and testing conducted by the Division, as well as requests for document submission, testing, and monitoring by the owner or operator pursuant to the Tennessee Petroleum Underground Storage Tank Act T.C.A. §68—53—107.

- (a) Reporting. Owners and/or operators must submit the following information to the Division:
 - 1. Notification for all UST systems (rule 1200—1—15—.02(3), which includes certification of installation for new UST systems (rules 1200—1—15—.02(1)(e));
 - 2. Reports of all releases including suspected releases (rule 1200—1—15—.05(1)), spills and overfills (rule 1200—1—15—.05(4)), and confirmed releases (rule 1200—1—15—.06(2));
 - 3. Corrective actions planned or taken including initial abatement measures (rule 1200—1—15—.06(3)), initial site characterization (rule 1200—1—15—.06(4)), free product removal (rule 1200—1—15—.06(5)), investigation of soil and ground-water cleanup (rule 1200—1—15—.06(6)), and corrective action plan (rule 1200—1—15—.06(7)); and
 - 4. A notification before permanent closure or change-in-service (rule 1200—1—15—.07(2)).
- (b) Recordkeeping. Owners and/or operators must maintain the following information:
 - 1. A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used (rule 1200—1—15—.02(1)(a)4; rule 1200—1—15—.02(1)(b)3);

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.03, continued)

2. Documentation of operation of corrosion protection equipment (rule 1200—1—15—.03(2));
 3. Documentation of UST system repairs (rule 1200—1—15—.03(4)(f));
 4. Recent compliance with release detection requirements (rule 1200—1—15—.04(5)); and
 5. Results of the site investigation conducted at permanent closure (rule 1200—1—15—.07(5)).
- (c) Availability and Maintenance of Records. Owners and/or operators must keep the records required either:
1. At the UST site and immediately available for inspection by the Division; or
 2. At a readily available alternative site and be provided for inspection to the Division upon request.
 3. In the case of permanent closure records required under rule 1200—1—15—.07(5), owners and/or operators are also provided with the additional alternative of mailing closure records to the Division if they cannot be kept at the site or an alternative site as indicated above.

Authority: T.C.A. §§68—53—101 et seq. and 4—5—201 et seq. Administrative History: Original rule filed March 1, 1990; effective April 15, 1990.

1200—1—15—.04 RELEASE DETECTION.

(1) General requirements for release detection.

- (a) Owners and/or operators of new and existing UST systems must provide a method, or combination of methods, of release detection that:
1. Can detect a release from any portion of the tank and the connected underground piping that routinely contains petroleum;
 2. Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition; and
 3. Meets the performance requirements in rule 1200—1—15—.04(3) or rule 1200—1—15—.04(4), with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, methods used after December 22, 1990 except for methods permanently installed prior to that date, must be capable of detecting the leak rate or quantity specified for that method in rule 1200—1—15—.04(3)(b), (c), and (d) or rule 1200—1—15—.04(4)(a) and (b) with a probability of detection of 0.95 and a probability of false alarm of 0.05.
- (b) When a release detection method operated in accordance with the performance standards in rule 1200—1—15—.04(3) and rule 1200—1—15—.04(4) indicates a release may have occurred, owners and operators must notify the Division in accordance with rule 1200—1—15—.05.
- (c) Owners and/or operators of all UST systems must comply with the release detection requirements of rule 1200—1—15—.04 by December 22 of the year listed in the following table:

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.04, continued)

Year System was installed	Year when release detection is required (by December 22 of the year indicated)				
	1989	1990	1991	1992	1993
Before 1965 or Date Unknown	RD	P			
1965-1969		P/RD			
1970-1974		P	RD		
1975-1979		P		RD	
1980-1988		P			RD

New tanks (after December 22, 1988) immediately upon installation

P - Must begin release detection for all pressurized piping in accordance with rule 1200—1—15—.04(2)(b)1.

RD - Must begin release detection for tanks and suction piping in accordance with rule 1200—1—15—.04(2)(a) and rule 1200—1—15—.04(2)(b)2.

- (d) Any existing UST system that cannot apply a method of release detection that complies with the requirements of rule 1200—1—15—.04 must complete the closure procedures in rule 1200—1—15—.07 by the date on which release detection is required for that UST system under subparagraph (c) of rule 1200—1—15—.04(1).

(2) Requirements for petroleum UST systems.

Owners and operators of petroleum UST systems must provide release detection for tanks and piping as follows:

- (a) Tanks. Tanks must be monitored at least every 30 days for releases using one of the methods listed in rule 1200—1—15—.04(3)(d)-(h) except that:

1. UST systems that meet the performance standards in rule 1200—1—15—.02(1) or rule 1200—1—15—.02(2), and the monthly inventory control requirements in rule 1200—1—15—.04(3)(a) or (b), may use tank tightness testing (conducted in accordance with rule 1200—1—15—.04(3)(c)) at least every 5 years until December 22, 1998 or until 10 years after the tank is installed or upgraded under rule 1200—1—15—.02(2)(b), whichever is later;
2. UST systems that do not meet the performance standards in rule 1200—1—15—.02(1) or rule 1200—1—15—.02(2) may use monthly inventory controls (conducted in accordance with rule 1200—1—15—.04(3)(a) or (b)) and annual tank tightness testing (conducted in accordance with rule 1200—1—15—.04(3)(c)) until December 22, 1998 when the tank must be upgraded under rule 1200—1—15—.02(2) or permanently closed under rule 1200—1—15—.07(2); and
3. Tanks with capacity of 550 gallons or less may use weekly tank gauging (conducted in accordance with rule 1200—1—15—.04(3)(b)).

- (b) Piping. Underground piping that routinely contains petroleum must be monitored for releases in a manner that meets one of the following requirements:

1. Pressurized piping. Underground piping that conveys petroleum under pressure must:

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.04, continued)

- (i) Be equipped with an automatic line leak detector conducted in accordance with rule 1200—1—15—.04(4)(a); and
 - (ii) Have an annual line tightness test conducted in accordance with rule 1200—1—15—.04(4)(b) or have monthly monitoring conducted in accordance with rule 1200—1—15—.04(4)(c).
2. Suction piping. Underground piping that conveys petroleum under suction must either have a line tightness test conducted at least every 3 years and in accordance with rule 1200—1—15—.04(4)(b), or use a monthly monitoring method conducted in accordance with rule 1200—1—15—.04(4)(c). No release detection is required for suction piping that is designed and constructed to meet the following standards:
- (i) The below-grade piping operates at less than atmospheric pressure;
 - (ii) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;
 - (iii) Only one check valve is included in each suction line;
 - (iv) The check valve is located directly below and as close as practical to the suction pump; and
 - (v) A method is provided that allows compliance with subparts (b)2(ii)-(iv) of rule 1200—1—15—.04(2) to be readily determined.
- (3) Methods of release detection for tanks.

Each method of release detection for tanks used to meet the requirements of rule 1200—1—15—.04(2) must be conducted in accordance with the following:

- (a) Inventory control. Product inventory control (or another test of equivalent performance) must be conducted monthly to detect a release of at least 1.0 percent of flow-through plus 130 gallons on a monthly basis in the following manner:
 - 1. Inventory volume measurements for petroleum inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day;
 - 2. The equipment used is capable of measuring the level of petroleum over the full range of the tank's height to the nearest one-eighth of an inch;
 - 3. The petroleum inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;
 - 4. Deliveries are made through a drop tube that extends to within one foot of the tank bottom;
 - 5. Petroleum dispensing is metered and recorded within the local standards for meter calibration or an accuracy of 6 cubic inches for every 5 gallons of petroleum withdrawn; and
 - 6. The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month.

[Note: American Petroleum Institute Publication 1621 (Fourth Edition, 1987), *Recommended Practice for Bulk Liquid Stock Control at Retail Outlets*, provides information on this subject.]

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.04, continued)

(b) Manual tank gauging. Manual tank gauging must meet the following requirements:

1. Tank liquid level measurements are taken at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;
2. Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period;
3. The equipment used is capable of measuring the level of petroleum over the full range of the tank's height to the nearest one-eighth of an inch;
4. A leak is suspected and subject to the requirements of rule 1200—1—15—.05 if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal Tank Capacity	Weekly Standard (one test)	Monthly Standard (Average of 4 Tests)
550 gallons or less	10 gallons	5 gallons
551-1000 gallons	13 gallons	7 gallons
1001-2000 gallons	26 gallons	13 gallons

5. Only tanks of 550 gallons or less nominal capacity may use this as the sole method of release detection. Tanks of 551 to 2,000 gallons may use the method in place of manual inventory control in rule 1200—1—15—.04(3)(a). Tanks of greater than 2,000 gallons nominal capacity may not use this method to meet the requirements of this rule.
- (c) Tank tightness testing. Tank tightness testing (or another test of equivalent performance) must be capable of detecting a 0.1 gallon per hour leak rate from any portion of the tank that routinely contains petroleum while accounting for the effects of thermal expansion or contraction of the petroleum, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.
- (d) Automatic tank gauging. Equipment for automatic tank gauging that tests for the loss of petroleum and conducts inventory control must meet the following requirements:
1. The automatic product level monitor test can detect a 0.2 gallon per hour leak rate from any portion of the tank that routinely contains petroleum; and
 2. Inventory control (or another test of equivalent performance) is conducted in accordance with the requirements of rule 1200—1—15—.04(3)(a).
- (e) Vapor monitoring. Testing or monitoring for vapors within the soil gas of the excavation zone must meet the following requirements:
1. The materials used as backfill are sufficiently porous (e.g., gravel, sand, crushed rock) to readily allow diffusion of vapors from releases into the excavation area;
 2. The stored petroleum, or a tracer compound placed in the tank system, is sufficiently volatile (e.g., gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank;

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.04, continued)

3. The measurement of vapors by the monitoring device is not rendered inoperative by the ground water, rainfall, or soil moisture or other known interferences so that a release could go undetected for more than 30 days;
 4. The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the tank;
 5. The vapor monitors are designed and operated to detect any significant increase in concentration above background of the petroleum stored in the tank system, a component or components of that substance, or a tracer compound placed in the tank system;
 6. In the UST excavation zone, the site is assessed to ensure compliance with the requirements in parts (e)1.-4. of rule 1200—1—15—.04(3) and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the tank that routinely contains petroleum; and
 7. Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.
- (f) Groundwater monitoring. Testing or monitoring for liquids on the ground water must meet the following requirements:
1. Ground water monitoring shall not be allowed in areas where the tank excavation zone has encountered bedrock.
 2. The petroleum stored is immiscible in water and has a specific gravity of less than one;
 3. Ground water is never more than 20 feet from the ground surface and the hydraulic conductivity of the soil(s) between the UST system and the monitoring wells or devices is not less than 0.01 cm/sec (e.g., the soil should consist of gravels, coarse to medium sands, coarse silts or other permeable materials);
 4. The slotted portion of the monitoring well casing must be designed to prevent migration of natural soils or filter pack into the well and to allow entry of petroleum on the water table into the well under both high and low ground water conditions;
 5. Monitoring wells shall be sealed from the ground surface to the top of the filter pack;
 6. Monitoring wells or devices intercept the excavation zone or are as close to it as is technically feasible;
 7. The continuous monitoring devices or manual methods used can detect the presence of at least one-eighth of an inch of free product on top of the ground water in the monitoring wells;
 8. Within and immediately below the UST system excavation zone, the site is assessed to ensure compliance with the requirements in parts (f)1.-5. of rule 1200—1—15—.04(3) and to establish the number and positioning of monitoring wells or devices that will detect releases from any portion of the tank that routinely contains petroleum; and
 9. Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.
- (g) Interstitial monitoring. Interstitial monitoring between the UST system and a secondary barrier immediately around or beneath it may be used, but only if the system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains petroleum and also meets one of the following requirements:

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.04, continued)

1. For double-walled UST systems, the sampling or testing method can detect a release through the inner wall in any portion of the tank that routinely contains petroleum;

[Note: Steel Tank Institute's (April, 1989 Edition) *Standard for Dual Wall Underground Storage Tanks* provides information on this subject.]

2. For UST systems with a secondary barrier within the excavation zone, the sampling or testing method used can detect a release between the UST system and the secondary barrier;

- (i) The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (at least 10-6 cm/sec for the petroleum stored) to direct a release to the monitoring point and permit its detection;

- (ii) The barrier is compatible with the petroleum stored so that a release from the UST system will not cause a deterioration of the barrier allowing a release to pass through undetected;

- (iii) For cathodically protected tanks, the secondary barrier must be installed so that it does not interfere with the proper operation of the cathodic protection system;

- (iv) The ground water, soil moisture, or rainfall will not render the testing or sampling method used inoperative so that a release could go undetected for more than 30 days;

- (v) The site is assessed to ensure that the secondary barrier is always above the ground water and not in a 25-year flood plain, unless the barrier and monitoring designs are for use under such conditions; and,

- (vi) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

3. For tanks with an internally fitted liner, an automated device can detect a release between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.

(h) Other methods. Any other type of release detection method, or combination of methods, can be used if:

1. It can detect a 0.2 gallon per hour leak rate or a release of 150 gallons within a month with a probability of detection of 0.95 and a probability of false alarm of 0.05; or

2. The Division may approve another method if the owner and operator can demonstrate that the method can detect a release as effective as any of the methods allowed in subparagraphs (c)-(h) of rule 1200—1—15—.04(3). In comparing methods, the Division shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner and operator must comply with any conditions imposed by the Division on its use to ensure the protection of human health and the environment.

(4) Methods of release detection for piping.

Each method of release detection for piping used to meet the requirements of rule 1200—1—15—.04(2) must be conducted in accordance with the following:

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.04, continued)

- (a) Automatic line leak detectors. Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of petroleum through piping or triggering an audible or visual alarm may be used only if they detect leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour. An annual test of the operation of the leak detector must be conducted in accordance with the manufacturer's requirements.
 - (b) Line tightness testing. A periodic test of piping may be conducted only if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.
 - (c) Applicable tank methods. Any of the methods in rule 1200—1—15—.04(3)(e) through (h) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains petroleum.
- (5) Release detection recordkeeping.

All UST system owners and/or operators must maintain records in accordance with rule 1200—1—15—.03(5) demonstrating compliance with all applicable requirements of rule 1200—1—15—.04. These records must include the following:

- (a) All written performance claims pertaining to any release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, must be maintained for 5 years from the date of installation;
- (b) The results of any sampling, testing, or monitoring must be maintained for at least 1 year except that the results of tank tightness testing conducted in accordance with rule 1200—1—15—.04(3)(c) must be retained until the next test is conducted; and
- (c) Written documentation of all calibration, maintenance, and repair of release detection equipment permanently located on-site must be maintained for at least one year after the servicing work is completed. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained for 5 years from the date of installation.

Authority: T.C.A. §§68—53—101 et seq. and 4—5— 201 et seq. Administrative History: Original rule filed March 1, 1990; effective April 15, 1990.

1200—1—15—.05 RELEASE REPORTING, INVESTIGATION AND CONFIRMATION.

- (1) Reporting of suspected releases.

Owners and/or operators of UST systems must report to the Division within 72 hours and follow the procedures in rule 1200—1—15—.05(3) for any of the following conditions:

- (a) The discovery by owners and/or operators or others of released petroleum at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water).
- (b) Unusual operating conditions observed by owners and/or operators (such as the erratic behavior of petroleum dispensing equipment, the sudden loss of petroleum from the UST system, or an unexplained presence of water in the tank), unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced; and,
- (c) Monitoring results from a release detection method required under rule 1200—1—15—.04(2) that indicate a release may have occurred unless:

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.05, continued)

1. The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result; or
 2. In the case of inventory control, a second month of data does not confirm the initial result.
- (2) Investigation due to off-site impacts.

When required by the Division, owners and/or operators of UST systems must follow the procedures in rule 1200—1—15—.05(3) to determine if the UST system is the source of off-site impacts. These impacts include the discovery of petroleum (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface and drinking waters) that has been observed by the Division or brought to its attention by another party.

- (3) Release investigation and confirmation steps.

Unless corrective action is initiated in accordance with rule 1200—1—15—.06, owners and/or operators must immediately investigate and confirm all suspected releases of petroleum requiring reporting under rule 1200—1—15—.05(1) within 7 days using the following steps:

- (a) System test. Owners and/or operators must conduct tests (according to the requirements for tightness testing in rule 1200—1—15—.04(3)(c) and rule 1200—1—15—.04(4)(b)) that determine whether a leak exists in that portion of the tank that routinely contains petroleum, or the attached delivery piping, or both.
1. Owners and/or operators must repair, replace or upgrade the UST system, and begin corrective action in accordance with rule 1200—1—15—.06 if the test results for the system, tank, or delivery piping indicate that a leak exists.
 2. Further investigation is not required if the test results for the system, tank, and delivery piping do not indicate that a leak exists and if environmental contamination is not the basis for suspecting a release.
 3. Owners and/or operators must conduct a site check as described in paragraph (b) of this section if the test results for the system, tank, and delivery piping do not indicate that a leak exists but environmental contamination is the basis for suspecting a release.
- (b) Site check. Owners and/or operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and/or operators must consider the nature of the stored petroleum, the type of initial alarm or cause for suspicion, the type of backfill, the depth of ground water, and other factors appropriate for identifying the presence and source of the release.
1. If the test results for the excavation zone or the UST site indicate that a release has occurred, owners and/or operators must begin corrective action in accordance with rule 1200—1—15—.06;
 2. If the test results for the excavation zone or the UST site do not indicate that a release has occurred, further investigation is not required.
- (4) Reporting and cleanup of spills and overfills.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.05, continued)

- (a) Owners and/or operators of UST systems must contain and immediately clean up a spill or overfill and report to the Division within 72 hours and begin corrective action if a spill or overfill of petroleum results in a release to the environment that exceeds 25 gallons or that causes a sheen on nearby surface water; or
- (b) Owners and operators of UST systems must contain and immediately clean up a spill or overfill of petroleum that is less than 25 gallons. If cleanup cannot be accomplished within 72 hours owners and/or operators must immediately notify the Division.

Authority: T.C.A. §68—53—101 et seq. and 4—5—201 et seq. Administrative History: Original rule filed March 1, 1990; effective April 15, 1990.

1200—1—15—.06 RELEASE RESPONSE AND CORRECTIVE ACTION FOR UST SYSTEMS CONTAINING PETROLEUM.

(1) General.

Owners and/or operators of petroleum UST systems must, in response to a confirmed release from the UST system, comply with the requirements of rule 1200—1—15—.06.

(2) Initial response.

Upon confirmation of a release in accordance with rule 1200—1—15—.05(3) or after a release from the UST system is identified in any other manner, owners and/or operators must perform the following initial response actions:

- (a) Report the release to the Division within 72 hours (e.g., by telephone or electronic mail);
- (b) Take immediate action to prevent any further release of the petroleum into the environment; and
- (c) Take immediate action to identify and mitigate fire, explosion, and vapor hazards.

(3) Initial abatement measures and site check.

- (a) Unless directed to do otherwise by the Division, owners and/or operators must perform the following abatement measures:
 1. Remove as much of the petroleum from the UST system as is necessary to prevent further release to the environment;
 2. Visually inspect any aboveground releases or exposed belowground releases and prevent further migration of the petroleum into surrounding soils and ground water;
 3. Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements);
 4. Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. If these remedies include treatment or disposal of soils, the owner and/or operator must comply with applicable state and local requirements;

UNDERGROUND STORAGE TANKS PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.06, continued)

5. Measure for the presence of a release where contamination is most likely to be present at the UST site, unless the presence and source of the release have been confirmed in accordance with the site check required by rule 1200—1—15—.05(3)(b) or the closure site assessment of rule 1200—1—15—.07(3)(a). In selecting sample types, sample locations, and measurement methods, the owner and operator must consider the nature of the stored petroleum, the type of backfill, depth to ground water and other factors as appropriate for identifying the presence and source of the release; and
 6. Investigate to determine the possible presence of free product, and begin free product removal as soon as practicable and in accordance with rule 1200—1—15—.06(5).
- (b) Within 20 days after release confirmation owners and/or operators must submit a report to the Division summarizing the initial abatement steps taken under subparagraph (a) of rule 1200—1—15—.06(3) and any resulting information or data.
- (4) Initial site characterization.
- (a) Unless directed to do otherwise by the Division, owners and/or operators must assemble information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in rule 1200—1—15—.06(1) and rule 1200—1—15—.06(2). This information must include, but is not necessarily limited to the following:
 1. Data on the nature and estimated quantity of release;
 2. Data from available sources and/or site investigations concerning the following factors: surrounding populations, water quality, use and approximate locations of wells potentially affected by the release, subsurface soil conditions, locations of subsurface sewers, climatological conditions, and land use;
 3. Results of the site check required under rule 1200—1—15—.06(3)(a)5; and
 4. Results of the free product investigations required under rule 1200—1—15—.06(3)(a)6, to be used by owners and/or operators to determine whether free product must be recovered under rule 1200—1—15—.06(5).
 - (b) Within 45 days of release confirmation owners and/or operators must submit the information collected in compliance with subparagraph (a) of rule 1200—1—15—.06(4) to the Division in a manner that demonstrates its applicability and technical adequacy, or in a format and according to the schedule required by the Division.
- (5) Free product removal.

At sites where investigations under rule 1200—1—15—.06(3)(a)6 indicate the presence of free product, owners and/or operators must remove free product to the maximum extent practicable as determined by the Division while continuing, as necessary, any actions initiated under rule 1200—1—15—.06(2) through rule 1200—1—15—.06(4), or preparing for actions required under rule 1200—1—15—.06(6) through rule 1200—1—15—.06(7). In meeting the requirements of this paragraph, owners and/or operators must:

UNDERGROUND STORAGE TANKS PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.06, continued)

- (a) Conduct free product removal in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery byproducts in compliance with applicable local, state and federal regulations;
- (b) Use abatement of free product migration as a minimum objective for the design of the free product removal system;
- (c) Handle any flammable products in a safe and competent manner to prevent fires or explosions; and
- (d) Unless directed to do otherwise by the Division, prepare and submit to the Division, within 45 days after confirming a release, a free product removal report that provides at least the following information:
 - 1. The name of the person(s) responsible for implementing the free product removal measures;
 - 2. The estimated quantity, type, and thickness of free product observed or measured in wells, boreholes, and excavations;
 - 3. The type of free product recovery system used;
 - 4. Whether any discharge will take place on-site or off-site during the recovery operation and where this discharge will be located;
 - 5. The type of treatment applied to, and the effluent quality expected from, any discharge;
 - 6. The steps that have been or are being taken to obtain necessary permits for any discharge; and
 - 7. The disposition of the recovered free product.
- (6) Investigations for soil and ground water cleanup.
 - (a) In order to determine the full extent and location of soils contaminated by the release and the presence and concentrations of dissolved product contamination in the ground water, owners and/or operators must conduct investigations of the release, the release site, and the surrounding area possibly affected by the release if any of the following conditions exist:
 - 1. There is evidence that ground water wells have been affected by the release (e.g., as found during release confirmation or previous corrective action measures);
 - 2. Free product is found to need recovery in compliance with rule 1200—1—15—.06(5);
 - 3. There is evidence that contaminated soils may be in contact with ground water (e.g., as found during conduct of the initial response measures or investigations required under rule 1200—1—15—.06(1) through rule 1200—1—15—.06(5); and
 - 4. The Division requests an investigation, based on the potential effects of contaminated soil or ground water on nearby surface water and ground water resources.
 - (b) Owners and/or operators must submit the information collected under subparagraph (a) of this paragraph as soon as practicable or in accordance with a schedule established by the Division.

UNDERGROUND STORAGE TANKS PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.06, continued)

(7) Corrective action plan.

- (a) At any point after reviewing the information submitted in compliance with rule 1200—1—15—.06(2) through rule 1200—1—15—.06(4), the Division may require owners and/or operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and ground water. If a plan is required, owners and/or operators must submit the plan according to a schedule and format established by the Division. Alternatively, owners and/or operators may, after fulfilling the requirements of rule 1200—1—15—.06(2) through rule 1200—1—15—.06(4), choose to submit a corrective action plan for responding to contaminated soil and ground water. In either case, owners and/or operators are responsible for submitting a plan that provides for adequate protection of human health and the environment as determined by the Division, and must modify their plan as necessary to meet this standard.
- (b) The Division will approve the corrective action plan only after ensuring that implementation of the plan will adequately protect human health, safety, and the environment. In making this determination, the Division should consider the following factors as appropriate:
 1. The physical and chemical characteristics of the petroleum, including its toxicity, persistence, and potential for migration;
 2. The hydrogeologic characteristics of the facility and the surrounding area;
 3. The proximity, quality, and current and future uses of nearby surface water and ground water;
 4. The potential effects of residual contamination on nearby surface water and ground water;
 5. An exposure assessment; and
 6. Any information assembled in compliance with rule 1200—1—15—.06.
- (c) Upon approval of the corrective action plan or as directed by the Division, owners and/or operators must implement the plan, including modifications to the plan made by the Division. They must monitor, evaluate, and report the results of implementing the plan in accordance with a schedule and in a format established by the Division.
- (d) Owners and/or operators may, in the interest of minimizing environmental contamination and promoting more effective cleanup, begin cleanup of soil and ground water before the corrective action plan is approved provided that they:
 1. Notify the Division of their intention to begin cleanup;
 2. Comply with any conditions imposed by the Division, including halting cleanup or mitigating adverse consequences from cleanup activities; and
 3. Incorporate these self-initiated cleanup measures in the corrective action plan that is submitted to the Division for approval.
- (e)
 1. Ground water contaminated by petroleum from UST systems must be addressed in the corrective action plan and meet the levels as listed in Appendix 3 for drinking water supplies and non-drinking water supplies. The corrective action plan must determine if the contaminated ground water met the definition of a "drinking water supply" before the contamination occurred and propose site cleanup levels based on the category of ground water.

JUND STORAGE TANKS PROGRAM

CHAPTER 1200—1—15

—1—15—.06, continued)

2. Soil contaminated by petroleum from UST systems must be addressed in the corrective action plan. The level of soil cleanup shall follow Appendix 4. Soil cleanup levels shall vary depending upon the permeability of the soil and whether the ground water below the site is a "drinking water supply" or "non-drinking water supply". The permeability of the soil at the site and the type ground water below the site must be reported in the corrective action plan.
3. For sites where the background level of petroleum, due to natural conditions, exceeds the levels of cleanup required for soil and/or ground water in Appendices 3 and 4, then the owner and/or operator shall only be required to cleanup to the naturally occurring background levels.
4. After an owner and/or operator has treated petroleum contamination at a site for an extended period of time and the treatment system for soil and/or ground water has reached asymptotic levels for contaminant removal, then the owner and/or operator may request a site specific standard from the Commissioner. The site specific standard request must document the type of treatment used at the site, the length of treatment, and that the level of contaminant in the soil and/or ground water has remained relatively constant for at least four (4) quarters. The site specific standard request must also contain the parameters in paragraph 5 below. If the Commissioner does not act on the request within 90 days of receipt, it shall be deemed to be denied. The owner and/or operator may appeal any denial of a site specific standard request to the Board. The Commissioner shall submit an annual report to the Board documenting the site specific standards granted during the calendar year.
5. If the owner and/or operator believes that a particular site should not be subject to the cleanup requirements in Appendices 3 and 4, the owner and/or operator may petition the Commissioner for a site specific standard. The owner and/or operator must, at a minimum, include the following in the site specific standard request:
 - (i) The physical and chemical characteristics of petroleum; including its toxicity, persistence, and potential for migration;
 - (ii) The hydrogeologic characteristics of the petroleum site and the surrounding land;
 - (iii) The proximity, quality, and current and future uses of ground water;
 - (iv) An exposure assessment; and
 - (v) The proximity, quality, and current and future uses of surface waters.

Should the Commissioner deny the properly completed site specific standard request or fail to act within ninety (90) calendar days of receipt, the owner and/or operator may petition the Board for the site specific standard. The site specific standard request must include all items listed above, at a minimum.

6. If the owner and/or operator has been granted a site specific standard based on a request described in part 5. of this subparagraph and it is later determined that the information supplied in the request was not accurate or there has been a change in the information supplied in subparts 5.(i) through (v), then the Commissioner may revoke the site specific standard. The revocation of a site specific standard may be appealed to the Board.

UNDERGROUND STORAGE TANKS PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.06, continued)

(8) Public participation.

- (a) For each confirmed release that requires a corrective action plan, the Division must provide notice to the public by means designed to reach those members of the public directly affected by the release and the planned corrective action. This notice may include, but is not limited to, public notice in local newspapers, block advertisements, public service announcements, publication in a state register, letters to individual households, or personal contacts by field staff.
- (b) The Division must ensure that site release information and decisions concerning the corrective action plan are made available to the public for inspection upon request.
- (c) Before approving a corrective action plan, the Division may hold a public meeting to consider comments on the proposed corrective action plan if there is sufficient public interest, or for any other reason.
- (d) The Division must give public notice that complies with subparagraph (a) of rule 1200—1—15—.06(8) if implementation of an approved corrective action plan does not achieve the established cleanup levels in the plan and termination of that plan is under consideration by the Division.

Authority: T.C.A. §§68—53—101 et seq. and 4—5—201 et seq. Administrative History: Original rule filed March 1, 1990; effective April 15, 1990.

1200—1—15—.07 OUT-OF-SERVICE UST SYSTEMS AND CLOSURE

(1) Temporary closure.

- (a) When an UST system is temporarily closed, owners and/or operators must continue operation and maintenance of corrosion protection in accordance with rule 1200—1—15—.03(2), and any release detection in accordance with rule 1200—1—15—.04. Rule 1200—1—15—.05 and rule 1200—1—15—.06 must be complied with if a release is suspected or confirmed. However, release detection is not required as long as the UST system is empty. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remain in the system.
- (b) When an UST system is temporarily closed for 3 months or more, owners and/or operators must also comply with the following requirements:
 1. Leave vent lines open and functioning; and
 2. Cap and secure all other lines, pumps, manways, and ancillary equipment.
 3. File amended notification form showing the tank system as Temporarily Out of Use.
- (c) When an UST system is temporarily closed for more than 12 months, owners and/or operators must permanently close the UST system if it does not meet either performance standards in rule 1200—1—15—.02(1) for new UST systems or the upgrading requirements in rule 1200—1—15—.02(2), except that the spill and overfill equipment requirements do not have to be met. Owners and/or operators must permanently close the substandard UST systems at the end of this 12-month period in accordance with rule 1200—1—15—.07(2) through rule 1200—1—15—.07(5), unless the Division provides a written extension of the 12-month temporary closure period. Owners and/or operators must complete a site assessment in accordance with rule 1200—1—15—.07(3) before such an extension can be applied for.

UNDERGROUND STORAGE TANKS PROGRAM

(Rule 1200—1—15—.07, continued)

(2) Permanent closure and changes-in-service.

- (a) At least 30 days before beginning either permanent closure or a change-in-service under paragraphs (b) and (c) of rule 1200—1—15—.07(2) owners and/or operators must submit a site closure plan to the Division to permanently close or make the change-in-service, unless such action is in response to corrective action. The required assessment of the excavation zone under rule 1200—1—15—.07(3) must be performed after notifying the Division but before completion of the permanent closure or a change-in-service.
- (b) To permanently close a tank, owners and/or operators must empty and clean it by removing all liquids and accumulated sludges. All tanks taken out of service permanently must also be either removed from the ground or filled with an inert solid material such as a cement compound, sand, gravel, etc. The inert solid material must have a specific gravity greater than 1.0.
- (c) Continued use of an UST system to store a non-regulated substance is considered a change-in-service. Before a change-in-service, owners and/or operators must empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance with rule 1200—1—15—.07(3).
- (d) Should an owner and/or operator elect to excavate and remove a tank from the site, such excavation and removal must be done in accordance with Appendix 5.
- (e) Once a tank has been excavated, it may be stored on-site or transported off-site for storage or disposal. Excavated tanks which have not been cut into sections for disposal shall be considered in storage and shall at all times, while in storage, be maintained in a vapor-free state and stored in accordance with Appendix 5.
- (f) Tanks may not be stored at a UST facility unless they are maintained in a vapor-free state, stored in accordance with Appendix 5, and one of the following conditions are met:
 - 1. (i) Tanks have been cleaned by removal of all liquids and accumulated sludges; and
 - (ii) Tanks have been purged of vapors so that any explosive levels do not exceed 20 percent of the lower flammable limit for the regulated substance; and
 - (iii) Tanks have an opening or openings installed which comprise a minimum of 10 percent of the total tank surface area. Such openings will not be considered openings if they are in contact or contiguous with the ground or surface on which the tank may be resting; or
 - 2. 1.(i) and (ii) above have been complied with and there are no remaining USTs either in use or in a temporarily closed condition at the facility; or
 - 3. Tanks which are removed from a UST facility and are intended for reuse at the same or another facility as USTs may be stored at a UST facility if the owner and/or operator meets the conditions described in 1.(i) and (ii), and either removes the tank off-site from a UST facility or puts it back into service within 30 days of excavation.
- (g) Tanks must be stored in a manner which does not pose safety hazards. Tanks must be stored in a position with the tank's center of gravity closest to the ground. Tanks may not be stacked. Tanks must be secured so that they will not roll or slide across a level or sloping ground surface.

UNDERGROUND STORAGE TANKS PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.07, continued)

- (h) Transportation and disposal of tanks will be subject to all applicable Federal, State, and local laws and regulations concerning the safe transportation and proper disposal of such materials.

[Note: The following publications provide information on this subject: American Petroleum Institute Recommended Practice 1604 (Second Edition, December 1987), *Removal and Disposal of Used Underground Petroleum Storage Tanks*; American Petroleum Institute Publication 2015 (Third Edition, September 1985), *Cleaning Petroleum Storage Tanks*; American Petroleum Institute Recommended Practice 1631 (Second Edition, December 1987), *Interior Lining of Underground Storage Tanks*. The National Institute for Occupational Safety and Health Criteria Document 80-106 (1980 Edition), *Criteria for a Recommended Standard . . . Working in Confined Space* may be used as guidance for conducting safe closure procedures at some petroleum tanks.]

(3) Assessing the site at closure or change-in-service.

- (a) Before permanent closure or a change-in-service is completed, owners and/or operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and/or operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to ground water, and other factors appropriate for identifying the presence of a release. The requirements of this paragraph are satisfied if one of the external release detection methods allowed in rule 1200—1—15—.04(3)(e) and (f) is operating in accordance with the requirements in rule 1200—1—15—.04(3) at the time of closure, and indicates no release has occurred.
- (b) If contaminated soils, contaminated ground water, or free product as a liquid or vapor is discovered under subparagraph (a) of this paragraph, or by any other manner, owners and/or operators must begin corrective action in accordance with rule 1200—1—15—.06.

(4) Applicability to previously closed UST systems.

When directed by the Division, the owner and/or operator of an UST system permanently closed before December 22, 1988 must assess the excavation zone and close the UST system in accordance with rule 1200—1—15—.07 if releases from the UST may, in the judgment of the Division, pose a current or potential threat to human health and the environment.

(5) Closure records.

Owners and/or operators must maintain records in accordance with rule 1200—1—15—.03(5) that are capable of demonstrating compliance with closure requirements under rule 1200—1—15—.07. The results of the excavation zone assessment required in rule 1200—1—15—.07(3) must be maintained for at least 3 years after completion of permanent closure or change-in-service in one of the following ways:

- (a) By the owners and/or operators who took the UST system out of service;
- (b) By the current owners and/or operators of the UST system site; or
- (c) By mailing these records to the Division if they cannot be maintained at the closed facility.

Authority: T.C.A. §§68—53—101 et seq. and 4—5—201 et seq. Administrative History: Original rule filed March 1, 1990; effective April 15, 1990.

Appendix 1

Form No. 2000-000, Revised Edition 9/88
 EPA Form 2000-1 (Rev. 9/88)

Notification for Underground Storage Tanks		STATE USE ONLY	
UST Division, 200 Doctor's Bldg., 706 Church St., TN DHE, Nashville, TN 37247-4101		ID NUMBER _____	
TYPE OF NOTIFICATION		DATE RECEIVED	
<input type="checkbox"/> A. NEW FACILITY <input type="checkbox"/> B. AMENDED <input type="checkbox"/> C. CLOSURE _____ No. of tanks at facility _____ No. of continuation sheets attached		A. Date Entered into Computer _____ B. Data Entry Clerk Initials _____ C. Owner Was Contacted to Clarify Responses, Comments _____	
INSTRUCTIONS			
Please type or print in ink all items except "signature" in section V. This form must be completed for each location containing underground storage tanks. If more than five (5) tanks are owned at this location, photocopy the following sheets, and staple continuation sheets to the form.			

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless corrected, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means—

a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

c) if the State agency so requires, any facility that has undergone any changes in facility information or tank system status (any amended tank information needs to be included).

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including associated underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. Gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fungicides.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

1. Lays or reservoirs of tanks of 1,100 gallons or less capacity used for storing fuel for noncommercial purposes.
2. Tanks used for storing heating oil for residential use on the premises where stored.

3. Septic tanks;
4. passive incinerators (including gasifying incinerators) regulated under the National Gas Pipeline Safety Act of 1988, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrinsic pipeline facility regulated under State laws;
5. surface impoundments, pits, ponds, or lagoons;
6. storm water or waste water collection systems;
7. low-trough process tanks;
8. land lease or associated gathering lines directly related to oil or gas production and gathering operations;
9. storage tanks situated in an underground area (such as a basement, cellar, manure/drain, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, o.c., crude oil or any fraction thereof which is held at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Send completed forms to:

Underground Storage Tank Division
 200 Doctor's Building
 706 Church Street
 Tennessee Department of Health and Environment
 Nashville, TN 37247-4101

When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use. 3. If the State requires notification of any amendments to the facility and information to State agency immediately.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.

I. OWNERSHIP OF TANK(S) **II. LOCATION OF TANK(S)**

Owner Name (Corporate, Individual, Public Agency, or Other Entity) _____
 Street Address _____
 City _____ State _____ ZIP Code _____
 County _____
 Phone Number (include area code) _____

Latitude _____ Longitude _____
 (If same as Section I, mark box)
 Facility Name or Company Site Number, as applicable _____
 Street Address (P.O. Box not acceptable) _____
 City _____ State _____ ZIP Code _____
 County _____ Municipality _____

UNDERGROUND STORAGE TANKS PROGRAM

(Appendix 1, continued)

<p align="center">III. TYPE OF OWNER</p> <p> <input type="checkbox"/> Federal Government <input type="checkbox"/> Commercial <input type="checkbox"/> State Government <input type="checkbox"/> Private <input type="checkbox"/> Local Government </p>	<p align="center">IV. INDIAN LANDS</p> <p> <input type="checkbox"/> Tanks are located on land within an Indian Reservation or on other trust lands. <input type="checkbox"/> Tribe or Nation: _____ <input type="checkbox"/> Tanks are owned by native American nation, tribe, or individual. <input type="checkbox"/> _____ </p>															
<p>V. TYPE OF FACILITY</p> <p>Select the Appropriate Facility Description</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Gas Station</td> <td><input type="checkbox"/> Railroad</td> <td><input type="checkbox"/> Trucking/Transport</td> </tr> <tr> <td><input type="checkbox"/> Petroleum Distributor</td> <td><input type="checkbox"/> Federal - Non-Military</td> <td><input type="checkbox"/> Utilities</td> </tr> <tr> <td><input type="checkbox"/> Air Taxi (Airline)</td> <td><input type="checkbox"/> Federal - Military</td> <td><input type="checkbox"/> Residential</td> </tr> <tr> <td><input type="checkbox"/> Aircraft Owner</td> <td><input type="checkbox"/> Industrial</td> <td><input type="checkbox"/> Farm</td> </tr> <tr> <td><input type="checkbox"/> Auto Dealership</td> <td><input type="checkbox"/> Contractor</td> <td><input type="checkbox"/> Other (Explain) _____</td> </tr> </table>		<input type="checkbox"/> Gas Station	<input type="checkbox"/> Railroad	<input type="checkbox"/> Trucking/Transport	<input type="checkbox"/> Petroleum Distributor	<input type="checkbox"/> Federal - Non-Military	<input type="checkbox"/> Utilities	<input type="checkbox"/> Air Taxi (Airline)	<input type="checkbox"/> Federal - Military	<input type="checkbox"/> Residential	<input type="checkbox"/> Aircraft Owner	<input type="checkbox"/> Industrial	<input type="checkbox"/> Farm	<input type="checkbox"/> Auto Dealership	<input type="checkbox"/> Contractor	<input type="checkbox"/> Other (Explain) _____
<input type="checkbox"/> Gas Station	<input type="checkbox"/> Railroad	<input type="checkbox"/> Trucking/Transport														
<input type="checkbox"/> Petroleum Distributor	<input type="checkbox"/> Federal - Non-Military	<input type="checkbox"/> Utilities														
<input type="checkbox"/> Air Taxi (Airline)	<input type="checkbox"/> Federal - Military	<input type="checkbox"/> Residential														
<input type="checkbox"/> Aircraft Owner	<input type="checkbox"/> Industrial	<input type="checkbox"/> Farm														
<input type="checkbox"/> Auto Dealership	<input type="checkbox"/> Contractor	<input type="checkbox"/> Other (Explain) _____														
<p>VI. CONTACT PERSON IN CHARGE OF TANKS</p> <table style="width:100%;"> <tr> <td style="width:25%;">Name</td> <td style="width:25%;">Job Title</td> <td style="width:25%;">Address</td> <td style="width:25%;">Phone Number (Include Area Code)</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		Name	Job Title	Address	Phone Number (Include Area Code)											
Name	Job Title	Address	Phone Number (Include Area Code)													
<p>VII. FINANCIAL RESPONSIBILITY</p> <p>I have met the financial responsibility requirements in accordance with 40 CFR Subpart H <input type="checkbox"/></p> <hr style="border-top: 1px dashed black;"/> <p>Check All that Apply</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Self Insurance</td> <td><input type="checkbox"/> Guarantee</td> <td><input type="checkbox"/> State Funds</td> </tr> <tr> <td><input type="checkbox"/> Commercial Insurance</td> <td><input type="checkbox"/> Surety Bond</td> <td><input type="checkbox"/> Trust Fund</td> </tr> <tr> <td><input type="checkbox"/> Risk Retention Group</td> <td><input type="checkbox"/> Lender of Credit</td> <td><input type="checkbox"/> Other Method Allowed Specify _____</td> </tr> </table>		<input type="checkbox"/> Self Insurance	<input type="checkbox"/> Guarantee	<input type="checkbox"/> State Funds	<input type="checkbox"/> Commercial Insurance	<input type="checkbox"/> Surety Bond	<input type="checkbox"/> Trust Fund	<input type="checkbox"/> Risk Retention Group	<input type="checkbox"/> Lender of Credit	<input type="checkbox"/> Other Method Allowed Specify _____						
<input type="checkbox"/> Self Insurance	<input type="checkbox"/> Guarantee	<input type="checkbox"/> State Funds														
<input type="checkbox"/> Commercial Insurance	<input type="checkbox"/> Surety Bond	<input type="checkbox"/> Trust Fund														
<input type="checkbox"/> Risk Retention Group	<input type="checkbox"/> Lender of Credit	<input type="checkbox"/> Other Method Allowed Specify _____														
<p>VIII. CERTIFICATION (Read and sign after completing all sections)</p> <p>I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.</p>																
<p>Name and official title of owner or owner's authorized representative (Print)</p>	<p>Signature</p>	<p>Date Signed</p>														
<p>EPA estimates public reporting burden for this form to average 30 minutes per response including time for reviewing instructions, gathering and maintaining the data needed and completing and reviewing the form. Send comments regarding this burden estimate to Chief, Information Policy Branch PM-223, U.S. Environmental Protection Agency, 401 M Street, Washington D.C. 20460, marked "Attention Desk Officer for EPA." This form amends the previous notification form as printed in 40 CFR Part 280, Appendix L. Previous editions of this notification form may be used while supplies last.</p>																

UNDERGROUND STORAGE TANKS PROGRAM

(Appendix 1, continued)

X. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)					
Tank Identification Number	Tank No. _____				
1. Status of Tank (mark only one) Currently in Use Temporarily Out of Use <small>(Reference to 91 and section 21)</small> Permanently Out of Use <small>(Reference to 91 and section 21)</small> Amendment of Information	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
2. Date of Installation (mo./year)					
3. Estimated Total Capacity (gallons)					
4. Material of Construction (Mark all that apply) Asphalt Coated or Bare Steel Cathodically Protected Steel Epoxy Coated Steel Composite (Steel with Fiberglass) Fiberglass Reinforced Plastic Lined Interior Double Walled Polyethylene Tank Jacket Concrete Excavation Liner Unknown Other, Please specify _____ _____ _____ Has tank been repaired?	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
5. Piping (Material) (Mark all that apply) Bare Steel Galvanized Steel Fiberglass Reinforced Plastic Copper Cathodically Protected Double Walled Secondary Containment Unknown Other, Please specify _____ _____ _____	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
6. Piping (Type) (Mark all that apply) Suction: no valve at tank Suction: valve at tank Pressure Gravity Feed Has piping been repaired?	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				

UNDERGROUND STORAGE TANKS PROGRAM

(Appendix 1, continued)

Tank Identification Number	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____
7. Substance Currently or Last Stored in Greatest Quantity by Volume					
Gasoline	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Diesel	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Gasohol	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Kerosene	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Heating Oil	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Used Oil	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other, Please specify	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Hazardous Substance CERCLA name and/or, CAS number	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Mixture of Substances Please specify	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
X. TANKS OUT OF USE, OR CHANGE IN SERVICE					
1. Closing of Tank					
A. Estimated date last used (mo./day/year)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
B. Estimate date tank closed (mo./day/year)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
C. Tank was removed from ground	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
D. Tank was closed in ground	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
E. Tank filled with inert material Describe	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
F. Change in service	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>
2. Site Assessment Completed	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Evidence of a leak detected	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

UNDERGROUND STORAGE TANKS PROGRAM

(Appendix 1, continued)

XI CERTIFICATION OF COMPLIANCE (COMPLETE FOR ALL NEW AND UPGRADED TANKS AT THIS LOCATION)										
Tank Identification Number	Tank No. _____									
1. Installation										
A. Installer certified by tank and piping manufacturers	<input type="checkbox"/>									
B. Installer certified or licensed by the implementing agency	<input type="checkbox"/>									
C. Installation inspected by a registered engineer	<input type="checkbox"/>									
D. Installation inspected and approved by implementing agency	<input type="checkbox"/>									
E. Manufacturer's installation check-lists have been completed	<input type="checkbox"/>									
F. Another method allowed by State agency. Please specify.	<input type="checkbox"/>									
2. Release Detection (Mark all that apply)										
	TANK	PIPING								
A. Manual tank gauging	<input type="checkbox"/>									
B. Tank tightness testing	<input type="checkbox"/>									
C. Inventory controls	<input type="checkbox"/>									
D. Automatic tank gauging	<input type="checkbox"/>									
E. Vapor monitoring	<input type="checkbox"/>									
F. Groundwater monitoring	<input type="checkbox"/>									
G. Interstitial monitoring double walled tank/piping	<input type="checkbox"/>									
H. Interstitial monitoring/secondary containment	<input type="checkbox"/>									
I. Automatic line leak detectors	<input type="checkbox"/>									
J. Line tightness testing	<input type="checkbox"/>									
K. Other method allowed by implementing Agency. Please specify.	<input type="checkbox"/>									
3. Spill and Overfill Protection										
A. Overfill device installed	<input type="checkbox"/>									
B. Spill device installed	<input type="checkbox"/>									
<p>OATH: I certify the information concerning installation that is provided in section XI is true to the best of my belief and knowledge.</p> <p>Installer: _____ Signature _____ Date _____</p> <p style="margin-left: 100px;">Name</p> <p style="margin-left: 400px;">Signature</p> <p style="margin-left: 700px;">Date</p> <p style="margin-left: 100px;">_____</p> <p style="margin-left: 600px;">Company</p> <p style="margin-left: 250px;">Position</p>										

Appendix 2 — Statement for Shipping Tickets and Invoices

Note - A Federal law (the Resource Conservation and Recovery Act (RCRA), as amended (Pub. L. 98-616)) requires owners of certain underground storage tanks to notify designated State or local agencies by May 8, 1986, of the existence of their tanks. The Tennessee Petroleum Underground Storage Tank Act (T.C.A. §68—53—101 *et seq.*) also contains notification requirements. Notifications for tanks brought into use after July 1, 1989 must be made 15 days in advance of installation. Consult EPA's regulations, issued on November 8, 1986 (40 CFR Part 280) and state law (T.C.A. §68—53—101 *et seq.*) and state regulations (Chapter 1200—1—15) to determine if you are affected by these laws and regulations.

Appendix 3

PETROLEUM CONTAMINATION CLEANUP LEVELS

GROUND WATER CLEANUP LEVEL

	<u>BENZENE LEVEL</u>	<u>TOTAL PETROLEUM HYDROCARBON LEVEL</u>
DRINKING WATER	0.005 PPM	0.100 PPM
NON—DRINKING WATER	0.070 PPM	1.0 PPM

Appendix 4

PETROLEUM CONTAMINATION CLEANUP LEVELS

<u>SOIL PERMEABILITY</u>	<u>>10 -4 CM/SEC</u>	<u>10 -4 TO 10 -6 CM/SEC</u>	<u><10 -6CM/SEC</u>
<u>SOIL CLEANUP LEVEL</u>	<u>BTX. LEVEL PPM</u>		
DRINKING WATER	10	50	100
NON-DRINKING WATER	50	250	500

OR

TOTAL PETROLEUM HYDROCARBON CLEANUP LEVELS

<u>SOIL PERMEABILITY</u>	<u>>10 -4 CM/SEC</u>	<u>10 -4 TO 10 -6 CM/SEC</u>	<u><10 -6CM/SEC</u>
<u>SOIL CLEANUP LEVEL</u>	<u>T.P.H. PPM LEVEL</u>		
DRINKING WATER	100	250	500
NON-DRINKING WATER	250	500	1000

APPENDIX 5

REMOVAL OF UNDERGROUND TANKS

(1) Preparation

- (a) Drain product piping into the tank, being careful to avoid any spillage. Cap or remove product piping.
- (b) Remove liquids and residues from the tank by using explosion-proof or air-driven pumps. Pump motors and suction hoses must be bonded to the tank or otherwise grounded to prevent electrostatic ignition hazards. It may be necessary to use a hand pump to remove the last few inches of liquid from the bottom of the tank.

NOTE: (The Federal Resource Conservation and Recovery Act (RCRA) 42 U.S.C. Section 6901 et seq., and the Tennessee Hazardous Waste Management Act (HWMA) Part 1 T.C.A. §68—46—101 et seq. place restrictions on disposal of certain residues that may be present in some underground storage tanks. Residues from tanks that have held leaded gasoline should be treated with extreme caution. Lead compounds and other residues in the tank may be classified as hazardous wastes).

- (c) Excavate to the top of tank.
- (d) Remove the fill pipe, gauge pipe, vapor recovery truck connection, submersible pumps, and other tank fixtures. Remove the drop tube, except when it is planned to vapor-free the tank by using an eductor. Cap or remove all non-product lines, such as vapor recovery lines, except the vent line. The vent line must remain connected until the tank is purged. Temporarily plug all other tank openings so that all vapors will exit through the vent line during the vapor-freeing process.

(2) Purging

- (a) Remove flammable vapors by one of the methods described in B.2 through 5., or as required by local codes. These methods provide a means for temporary vapor-freeing of the tank atmosphere. However, it is important to recognize that the tank may continue to be a source of flammable vapors even after following the vapor-freeing procedures described in 2 through 5. For this reason, caution must always be exercised when handling or working around tanks that have stored flammable or combustible liquids. Before initiating work in the tank area or on the tank, a combustible gas indicator must be used to assess vapor concentrations in the tank and work area. All work must be done in accordance with Section C, "Testing"
- (b) Vent: all vapors from the tank at a minimum height of 12 feet above grade and 3 feet above any adjacent roof lines until the tank is purged of flammable vapors. The work area must be free from sources of ignition.
- (c) Flammable and combustible vapors may be purged with an inert gas such as carbon dioxide (CO₂) or nitrogen (N₂). This method is not to be utilized if the tank is to be entered for any reason, as the tank atmosphere will be oxygen deficient. The inert gas is to be introduced through a single tank opening at a point near the bottom of the tank at the end of the tank opposite the vent. When inert gases are used, they must be introduced under low pressure to avoid the generation of static electricity. When using CO₂ or N₂, pressures in the tank must not exceed 5 pounds per square inch gauge.

CAUTION: The process of introducing compressed gases into the tank may create a potential ignition hazard as the result of the development of static electrical charges. The discharging device must therefore be grounded. Explosions have resulted from the discharging of CO₂ fire extinguishers into tanks containing a flammable vapor-air mixture. CO₂ extinguishers must not be used for inerting flammable atmospheres.

(Appendix 5, continued)

- (d) If the method described in 3 is not practical, the vapors in the tank may be displaced by adding solid carbon dioxide (dry ice) to the tank in the amount of at least 1.5 pounds per 100 gallons of tank capacity. The dry ice should be crushed and distributed evenly over the greatest possible area in the tank to promote rapid evaporation. As the dry ice vaporizes, flammable vapors will flow out of the tank and may surround the area. Therefore, where practical, plug all tank openings except the vent after introducing the solid CO₂ and continue to observe all normal safety precautions regarding flammable or combustible vapors. Make sure that all of the dry ice has evaporated before proceeding.
- (e) Flammable vapors may be exhausted from the tank by one of two methods of tank ventilation listed below:
 - 1. Ventilation using an eductor-type air mover usually driven by compressed air. The eductor-type air mover must be properly bonded to prevent the generation and discharge of static electricity. When using this method, the fill (drop) tube must remain in place to ensure ventilation at the bottom of the tank. Tanks equipped with fill (drop) tubes that are not removable should be purged by this method. An eductor extension shall be used to discharge vapors a minimum of 12 feet above grade and at least 3 feet above any adjacent roof line.
 - 2. Ventilation with a diffused air blower. When using this purging method, it is imperative that the air-diffusing pipe is properly bonded to prevent the discharge of a spark. Fill (drop) tubes must be removed to allow proper diffusion of the air in the tank. Air supply should be from a compressor that has been checked to ensure a clean air supply and is free from volatile vapors. Air pressure in the tank must not exceed 5 pounds per square inch gauge.

(3) Testing

- (a) The tank atmosphere and the excavation area are to be regularly tested for flammable or combustible vapor concentrations until the tank is removed from both the excavation and the site. Such tests are to be made with a combustible gas indicator which is properly calibrated according to the manufacturer's instructions and which is thoroughly checked and maintained in accordance with the manufacturer's instructions. Persons responsible for testing must be completely familiar with the use of the instrument and the interpretation of the instrument's readings.
- (b) The tank vapor space is to be tested by placing the combustible gas indicator probe into the fill opening with the drop tube removed. Readings should be taken at the bottom, middle, and upper portions of the tank, and the instrument should be cleared after each reading. If the tank is equipped with a non-removable fill tube, readings are to be taken through another opening. Liquid product must not enter the probe. Readings of 20 percent or less of the lower flammable limit must be obtained before the tank is considered safe for removal from the ground.
- (c) Tanks purged with an inert gas must be sampled with an oxygen indicator and the oxygen content must be considered while interpreting combustible gas indicator results.

(4) Removal

- (a) After the tank has been freed of vapors and before it is removed from the excavation, plug or cap all accessible holes. One plug must have a 1/8-inch vent hole to prevent the tank from being subjected to excessive differential pressure caused by temperature changes. The tank must always be positioned with this vent plug on top of the tank during subsequent transport and storage.

(Appendix 5, continued)

- (b) Excavate around the tank to uncover it for removal. Remove the tank from the excavation and place it on a level surface. Use wood blocks to prevent movement of the tank after removal and prior to loading on a truck for transportation. Use screwed (boiler) plugs to plug any corrosion holes in the tank shell.
- (c) Precautions must be taken to assure any vapors left in the tank do not reach a combustible level. If this situation occurs, the tank must be purged according to Section B.
- (d) Before the tank is removed from the site, the tank atmosphere must be checked with a combustible gas indicator to ensure that it does not exceed 20 percent of the lower flammable limit.
- (e) The tank must be secured on a truck for transportation to the storage or disposal site with the 1/8-inch vent hole located at the uppermost point on the tank. Tanks must be transported in accordance with all applicable local, state, and federal laws and regulations.
- (f) Tanks must be labeled after removal from the ground but prior to removal from the site. Regardless of the condition of the tank, the label must contain a warning against certain types of reuse. The former contents and present vapor state of each tank, including vapor-freeing treatment and data must also be indicated. The label must be similar to the following in legible letters at least 2 inches high:

TANK HAS CONTAINED LEADED GASOLINE*

NOT VAPOR FREE

NOT SUITABLE FOR STORAGE OF FOOD OR LIQUIDS
INTENDED FOR HUMAN OR ANIMAL CONSUMPTION

DATE OF REMOVAL: MONTH/DAY/YEAR

*Or other flammable/combustible liquid. Use the applicable designation, for example, DIESEL.

Tanks that have held leaded motor fuels (or whose service history is unknown) must also be clearly labeled with the following information.

TANK HAS CONTAINED LEADED GASOLINE
LEAD VAPORS MAY BE RELEASED IF HEAT
IS APPLIED TO THE TANK SHELL

STORAGE OF USED TANKS

Storage Procedures

- (a) Tanks must be vapor-freed before being placed in storage. Tanks must also be free of all liquids and residues. All tank openings must be tightly plugged or capped, with one plug having a 1/8-inch vent hole to prevent the tank from being subjected to excessive differential pressure caused by temperature changes. Tanks must be stored with the vented plug at the highest point on the tank. All tanks must be labeled.
- (b) Used tanks must be stored in secure areas where the general public will not have access.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

1200—1—15—.08 FINANCIAL RESPONSIBILITY.

(1) Applicability

- (a) This rule applies to owners and operators of all petroleum underground storage tank (UST) systems except as otherwise provided in this paragraph.
- (b) Owners and operators of petroleum UST systems are subject to these requirements if they are in operation on or after the date for compliance established in rule 1200—1—15—.08(2).
- (c) State and federal government entities whose debts and liabilities are the debts and liabilities of a state or the United States are deemed to meet financial responsibility requirements without having to meet requirements of this rule.
- (d) The requirements of this rule do not apply to owners and operators of any UST system described in rule 1200—1—15—.01(1)(b).
- (e) If the owner and operator of a petroleum underground storage tank are separate persons, only one person is required to demonstrate financial responsibility; however, both parties are liable in event of noncompliance. Regardless of which party complies, the date set for compliance at a particular facility is determined by the characteristics of the owner as set forth in rule 1200—1—15—.08(2).

(2) Compliance Dates

Owners of petroleum underground storage tanks are required to comply with the requirements of this rule by the following dates:

- (a) All petroleum marketing firms owning 1,000 or more USTs and all other UST owners that report a tangible net worth of \$20 million or more to the U.S. Securities and Exchange Commission (SEC), Dun and Bradstreet, the Energy Information Administration, or the Rural Electrification Administration; January 24, 1989.
- (b) All petroleum marketing firms owning 100-999 USTs; October 26, 1989.
- (c) All petroleum marketing firms owning 13-99 USTs at more than one facility; April 26, 1991.
- (d) All petroleum UST owners not described in subparagraphs (a), (b), or (c) of this paragraph, including all local government entities; October 26, 1991.

(3) Definition of Terms.

When used in this rule, the following terms shall have the meanings given below:

- (a) "Accidental release" means any sudden or nonsudden release of petroleum from an underground storage tank that results in a need for corrective action and/or compensation for bodily injury or property damage neither expected nor intended by the tank owner or operator.
- (b) "Board" means Tennessee Petroleum Underground Storage Tank Board established under T.C.A. §68—53—101 *et seq.*
- (c) "Bodily injury" shall have the meaning given to this term by applicable Tennessee law.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

- (d) "Commissioner" means Commissioner of Health and Environment, his authorized representatives, or in the event of his absence or a vacancy in the Commissioner's Office, the Deputy Commissioner.
- (e) "Controlling interest" means direct ownership of at least 50 percent of the voting stock of another entity.
- (f) "Department" means the Department of Health and Environment.
- (g) "Financial reporting year" means the latest consecutive twelve-month period for which any of the following reports used to support a financial test is prepared: (1) a 10-K report submitted to the SEC; (2) an annual report of tangible net worth submitted to Dun and Bradstreet; or (3) annual reports submitted to the Energy Information Administration or the Rural Electrification Administration. "Financial reporting year" may thus comprise a fiscal or a calendar year period.
- (h) "Fund" means petroleum underground storage tank fund established under *T.C.A. §68—53—101 et seq.*, unless the context clearly indicates otherwise.
- (i) "Legal defense cost" is any expense that an owner or operator or provider of financial assurance incurs in defending against claims or actions brought (1) by EPA or the Commissioner to require corrective action or to recover the costs of corrective action; (2) by or on behalf of a third party for bodily injury or property damage caused by an accidental release; or (3) by any person to enforce the terms of a financial assurance mechanism.
- (j) "Occurrence" means the discovery of environmental contamination at a specific time and date, due to the release of petroleum products from petroleum underground storage tanks.
- (k) "Owner or operator," when the owner or operator are separate parties, refers to the party that is obtaining or has obtained financial assurances.
- (l) "Petroleum marketing facilities" include all facilities at which petroleum is produced or refined and all facilities from which petroleum is sold or transferred to other petroleum marketers or to the public.
- (m) "Petroleum marketing firms" are all firms owning petroleum marketing facilities. Firms owning other types of facilities with USTs as well as petroleum marketing facilities are considered to be petroleum marketing firms.
- (n) "Property damage" shall have the meaning given this term by applicable Tennessee law. Exclusions for property damage shall not include corrective action associated with releases from tanks which are covered by the policy.
- (o) "Provider of financial assurance" means an entity that provides financial assurance to an owner or operator of an underground storage tank through one of the mechanisms listed in rule 1200—1—15—.08(6) through rule 1200—1—15—.08(13), including a guarantor, insurer, risk retention group, surety, issuer of a letter of credit, or the state of Tennessee.
- (p) "Substantial business relationship" means the extent of a business relationship necessary under applicable Tennessee law to make a guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from and depends on existing economic transactions between the guarantor and the owner or operator.
- (q) "Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets do not include intangibles such as goodwill and rights to patents or royalties. For purposes of this definition, "assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity as a result of past transactions.
- (r) "Termination" under 1200—1—15—.08(8)1. and 1200—1—15—.08(8)2. means only those changes that could result in a gap in coverage as where the insured has not obtained substitute coverage or has obtained substitute coverage with a different retroactive date than the retroactive date of the original policy.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

(4) Amount and Scope of Required Financial Responsibility.

(a) Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following per-occurrence amounts:

1. For owners or operators of petroleum underground storage tanks that are located at petroleum marketing facilities, or that handle an average of more than 10,000 gallons of petroleum per month based on annual throughput for the previous calendar year; \$1 million.
2. For all other owners or operators of petroleum underground storage tanks; \$500,000.
3. For owners or operators who have paid all annual fees and have met all obligations to participate in the fund, the fund shall be responsible for the following:
 - (i) For owners or operators of 1 to 12 petroleum underground storage tanks, corrective action costs above ten thousand dollars (\$10,000) in an amount not to exceed one million dollars (\$1,000,000) per site per occurrence and court awards involving third party liability claims above ten thousand dollars (\$10,000) in an amount not to exceed one million dollars (\$1,000,000).
 - (ii) For owners or operators of 13 to 999 petroleum underground storage tanks, corrective action above twenty thousand dollars (\$20,000) in an amount not to exceed one million (\$1,000,000) per site per occurrence, and court awards involving third party liability claims above an amount not less than twenty five thousand dollars (\$25,000) nor more than fifty thousand dollars, and not to exceed one million dollars (\$1,000,000). The amount between twenty five thousand dollars (\$25,000) and fifty thousand dollars (\$50,000) will be set annually by the Board. Effective May 1, 1990 the amount is thirty seven thousand five hundred dollars (\$37,500) for third party claims.
 - (iii) For owners or operators of 1,000 or more petroleum underground storage tanks, corrective action costs above fifty thousand dollars (\$50,000) in an amount not to exceed one million dollars (\$1,000,000) per site per occurrence, and court awards involving third party liability claims above an amount not less than one hundred fifty thousand dollars (\$150,000) nor more than three hundred thousand dollars (\$300,000), and not to exceed one million dollars (\$1,000,000). The amount between one hundred fifty thousand dollars (\$150,000) and three hundred thousand dollars (\$300,000) will be set annually by the Board. Effective May 1, 1990 the amount is two hundred twenty-five thousand dollars (\$225,000) for third party claims.

This part is subject to rule 1200—1—15—.08(20)(d), and rule 1200—1—15—.09. The owners or operators eligible for fund benefit must have a per occurrence financial assurance of either twenty thousand dollars (\$20,000) for 1 to 12 petroleum underground storage tanks, fifty seven thousand five hundred dollars (\$57,500) for 13 to 999 petroleum underground storage tanks or two hundred seventy five thousand dollars (\$275,000) for 1,000 or more petroleum underground storage tanks. In the event the fund has insufficient resources to meet corrective action and/or third party compensation costs, the responsibility for paying for corrective action and/or third party compensation costs shall be the responsibility of the owner, operator, or other responsible party.

(b) Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following annual aggregate amounts:

1. To assure that owners or operators can meet financial requirements for entry to the fund for both corrective action and third party liability, owners or operators eligible for the fund must have annual aggregate amounts at least as large as the amount in the Annual Aggregate Amount column of Table 1 which corresponds to the number of tanks owned.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

Table 1
Number of Tanks Owned vs. Financial Responsibility Requirements

Number of Tanks Owned	Corrective Action Per Occurrence Amount	Third Party Compensation Per Occurrence Amount	Total Per Aggregate Amount	Annual Aggregate Amount*
1-12	\$10,000	\$10,000	\$20,000	\$20,000
13-999	\$20,000	\$37,500	\$57,500	\$77,500
1000+	\$50,000	\$225,000	\$275,000	\$375,000

* The Annual Aggregate Amount for owners of 13 to 999 tanks is determined by multiplying the Corrective Action Per Occurrence Amount by 2, then adding the Third Party Compensation Per Occurrence Amount. The Annual Aggregate Amount for owners of 1,000 or more tanks is determined by multiplying the Corrective Action Per Occurrence Amount by 3, then adding the Third Party Compensation Per Occurrence Amount.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

- (c) For the purposes of subparagraphs (b) and (f) only, "a petroleum underground storage tank" means a single containment unit and does not mean combinations of single containment units.
 - (d) Except as provided in subparagraph (e), if the owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for:
 1. taking corrective action; or
 2. compensating third parties for bodily injury and property damage caused by accidental releases;
 the amount of assurance provided by each mechanism or combination of mechanisms must be in the full amount specified in subparagraphs (a) and (b) of this paragraph.
 - (e) If an owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for different petroleum underground storage tanks, the annual aggregate required shall be based on the number of tanks covered by each such separate mechanism or combination of mechanisms.
 - (f) Owners or operators shall review the amount of aggregate assurance provided whenever additional petroleum underground storage tanks are acquired or installed. If the number of petroleum underground storage tanks for which assurance must be provided exceeds 12, the owner or operator shall demonstrate financial responsibility in the amount defined in subparagraph (b) by the anniversary of the date on which the mechanism demonstrating financial responsibility became effective. If assurance is being demonstrated by a combination of mechanisms, the owner or operator shall demonstrate financial responsibility in the amount defined in subparagraph (b) by the first-occurring effective date anniversary of any one of the mechanisms combined (other than a financial test or guarantee) to provide assurance.
 - (g) The amounts of assurance required under this paragraph exclude legal defense costs.
 - (h) The required per-occurrence and annual aggregate coverage amounts do not in any way limit the liability of the owner or operator.
- (5) Allowable Mechanisms and Combinations of Mechanisms
- (a) Subject to the limitations of subparagraph (b) of this paragraph, an owner or operator may use any one or combination of the mechanisms listed in rule 1200—1—15—.08(6) through rule 1200—1—15—.08(13) to demonstrate financial responsibility under this rule for one or more underground storage tanks.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

- (b) An owner or operator may use self-insurance in combination with a guarantee only if, for the purpose of meeting the requirements of the financial test under this rule, the financial statements of the owner or operator are not consolidated with the financial statements of the guarantor.

(6) Financial Test of Self-Insurance

- (a) An owner or operator, and/or guarantor, may satisfy the requirements of rule 1200—1—15—.08(4) by passing a financial test as specified in this paragraph. To pass the financial test of self-insurance, the owner or operator, and/or guarantor must meet the criteria of subparagraph (b) or (c) of this paragraph based on year-end financial statements for the latest completed fiscal year or financial reporting year. If an owner or operator has in effect more than one financial test for self-insurance at any one time to assure financial responsibility, the owner or operator must have a tangible net worth and/or a net working capital of at least (X) times the sum of the total amounts for which this financial test is used, where (X) equals the Self-Insurance Amount from Table 2 divided by the Annual Aggregate Amount from Table 2 based on the number of tanks for which this financial test is used. Table 2 shall be used in both subparagraphs (b) and (c) in determining the tangible net worth and/or net working capital which an owner or operator and/or guarantor must demonstrate in order to self-insure for corrective action and/or third party liability based on the number of tanks for which this financial test is used.

Table 2

Number of Tanks Owned	Corrective Action Per Occurrence Amount	Third Party Compensation Per Occurrence Amount	Total Per Occurrence Amount	Annual Aggregate Amount	Self Insurance Amount
1-12*	\$10,000	\$10,000	\$20,000	\$20,000	\$20,000*
1-12	\$10,000	\$10,000	\$20,000	\$20,000	\$30,000
13-999	\$20,000	\$37,500	\$57,500	\$77,500	\$117,500
1000+	\$50,000	\$225,000	\$275,000	\$375,000	\$525,000

- * This applies when either all tanks and associated piping are new, upgraded, a combination of new and upgraded, or are located at only one facility.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

- (b) If the owner or operator, and/or guarantor desires to self-insure and does not choose to meet the requirements of (6)(c), the owner or operator and/or guarantor must meet the requirements of this subparagraph.
1. The owner or operator, and/or guarantor, must have a tangible net worth of at least (X) times the sum of (i), (ii) and (iii). (X) equals the Self-Insurance Amount from Table 2 divided by the Annual Aggregate Amount from Table 2 based on the number of tanks for which this financial test is used.
 - (i) The owner or operator may self-insure for all or part of the Annual Aggregate Amount specified in rule 1200—1—15—.08(4)(b) based on the number of underground storage tanks for which this financial test is used to demonstrate financial responsibility.
 - (ii) The sum of the corrective action cost estimates, the current closure and post-closure care cost estimates, and amount of liability coverage for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR Parts 264.101, 264.143, 264.145, 265.143, 265.145, 264.147, and 265.147 or to a state implementing agency under a state program authorized by EPA under 40 CFR Part 271; and
 - (iii) The sum of current plugging and abandonment cost estimates for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR Part 144.63 or to a state implementing agency under a state program authorized by EPA under 40 CFR Part 145.
 2. The owner or operator, and/or guarantor, must have a letter signed by the chief financial officer worded as specified in subparagraph (d).
 3. The owner or operator, and/or guarantor, must either:
 - (i) File financial statements annually with the U.S. Securities and Exchange Commission, the Energy Information Administration, or the Rural Electrification Administration; or
 - (ii) Report annually the firm's tangible net worth to Dun and Bradstreet, and Dun and Bradstreet must have assigned the firm a financial strength rating of 4A or 5A.
 4. The firm's year-end financial statements, if independently audited, cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.
- (c) If the owner or operator, and/or guarantor desires to self-insure and does not choose to meet the requirements of 6(b), the owner or operator and/or guarantor must meet the requirements of this subparagraph.
1. The owner or operator, and/or guarantor must meet the financial test requirements of subpart (i) or (ii) of this part.
 - (i) The owner or operator must have:
 - (I) Net working capital and tangible net worth each at least (X) times the amount of liability coverage to be demonstrated by this test, where (X) equals the Self-Insurance Amount from Table 2 divided by the Annual Aggregate Amount from Table 2 based on the number of tanks for which this financial test is used; and
 - (II) Tangible net worth at least (X) times the amount of liability coverage to be demonstrated by this test, where (X) equals the Self-Insurance Amount from Table 2 divided by the Annual Aggregate Amount from Table 2 based on the number of tanks for which this financial test is used; and

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

- A. At least 90 percent of his total assets; or
 - B. At least (X) times the amount of liability coverage to be demonstrated by this test, where (X) equals the Self-Insurance Amount from Table 2 divided by the Annual Aggregate Amount from Table 2 based on the number of tanks for which this financial test is used; and
- (ii) The owner or operator must have:
- (I) A current rating for his most recent bond issuance of AAA, AA, A or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and
 - (II) Tangible net worth at least (X) times the amount of liability coverage to be demonstrated by this test, where (X) equals the Self-Insurance Amount from Table 2 divided by the Annual Aggregate Amount from Table 2 based on the number of tanks for which this financial test is used; and
 - (III) Assets in the United States amounting to either:
 - A. At least 90 percent of his total assets; or
 - B. At least (X) times the amount of liability coverage to be demonstrated by this test, where (X) equals the Self-Insurance Amount from Table 2 divided by the Annual Aggregate Amount from Table 2 based on the number of tanks for which this financial test is used;
2. The fiscal year-end financial statements of the owner or operator, and/or guarantor, must be examined by an independent certified public accountant and be accompanied by the accountant's report of the examination.
3. The firm's year-end financial statements cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.
4. The owner or operator, and/or guarantor, must have a letter signed by the chief financial officer, worded as specified in subparagraph (d).
5. If the financial statements of the owner or operator, and/or guarantor, are not submitted annually to the U.S. Securities and Exchange Commission, the Energy Information Administration or the Rural Electrification Administration, the owner or operator, and/or guarantor, must obtain a special report by an independent certified public accountant stating that:
- (i) He has compared the data that the letter from the chief financial officer specifies as having been derived from the latest year-end financial statements of the owner or operator, and/or guarantor, with the amounts in such financial statements; and
 - (ii) In connection with that comparison, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(Rule 1200—1—15—.08, continued)

- (d) To demonstrate that it meets the financial test under subparagraph (b) or (c), the chief financial officer of the owner or operator, and/or guarantor, must sign, within 120 days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of the owner or operator, or guarantor]. This letter is in support of the use of [insert: "the financial test of self-insurance," and/or "guarantee"] to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by accidental releases in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test or a financial test under an authorized state program by this [insert: "owner or operator," and/or "guarantor"]: [List for each facility: the name and address of the facility where tanks assured by this financial test are located, the number of tanks at each facility, and the facility identification number(s). If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test by the tank identification number provided in the notification submitted pursuant to rule 1200—1—15—.02(3).

A [insert: "financial test," and/or "guarantee"] is also used by this [insert: "owner or operator," or "guarantor"] to demonstrate evidence of financial responsibility in the following amounts under other EPA regulations or state programs authorized by EPA under 40 CFR Parts 271 and 145:

Amount EPA Regulation:

Closure (264.143 and 265.143)	\$ _____
Post-Closure Care (264.145 and 265.145)	\$ _____
Liability Coverage (264.147 and 265.147)	\$ _____
Corrective Action (264.101(b))	\$ _____
Plugging and Abandonment (144.63)	\$ _____

or

Amount Authorized State Programs:

Closure (Rule 1200—1—11—.06(8)(d) and rule 1200—1—11—.05(8)(d))	\$ _____
Post-Closure Care (Rule 1200—1—11—.06(8)(f) and rule 1200—1—11—.05(8)(f))	\$ _____
Liability Coverage (Rule 1200—1—11—.06(8)(n) and rule 1200—1—11—.05(8)(n))	\$ _____
Corrective Action (Rule 1200—1—11—.06(1)2.)	\$ _____
Plugging and Abandonment (Rule 1200—4—6—.09(6))	\$ _____

This [insert: "owner or operator," or "guarantor"] has not received an adverse opinion, a disclaimer of opinion, or a "going concern" qualification from an independent auditor on his financial statements for the latest completed fiscal year or financial reporting year.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

[Fill in the information for Alternative I if the criteria of subparagraph (b) of rule 1200—1—15—.08(6) are being used to demonstrate compliance with the financial test requirements. Fill in the information for Alternative II if the criteria of subparagraph (c) of rule 1200—1—15—.08(6) are being used to demonstrate compliance with the financial test requirements.]

ALTERNATIVE I

- (1) Amount of annual UST aggregate coverage being assured by a financial test, and/or guarantee\$ _____
 - (2) Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee\$ _____
 - (3) Sum of lines 1 and 2\$ _____
 - (4) Total tangible assets\$ _____
 - (5) Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6]\$ _____
 - (6) Tangible net worth [subtract line 5 from line 4]\$ _____
- Yes No
- (7) Is line 6 at least (X) times line 3? _____
 (X) equals the Self-Insurance Amount from Table 2 divided by the Annual Aggregate Amount from Table 2 based on the number of tanks for which this financial test is used.
 - (8) Have financial statements for the latest fiscal year been filed with the Securities and Exchange Commission?
 - (9) Have financial statements for the latest fiscal year been filed with the Energy Information Administration?
 - (10) Have financial statements for the latest fiscal year been filed with the Rural Electrification Administration?
 - (11) Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating of 4A or 5A? [Answer "Yes" only if both criteria have been met.]

UNDERGROUND STORAGE TANK PROGRAM

(Rule 1200-1-15-.08, continued)

ALTERNATIVE II

- (1) Amount of annual UST aggregate coverage being assured by a financial test, and/or guarantee\$ _____
- (2) Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee\$ _____
- (3) Sum of lines 1 and 2\$ _____
- (4) Total tangible assets\$ _____
- (5) Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6]\$ _____
- (6) Tangible net worth [subtract line 5 from line 4]\$ _____
- (7) Total assets in the U.S. [required only if less than 90 percent of assets are located in the U.S.]\$ _____

Yes No

- (8) Is line 6 at least (X) times line 3? _____

(X) equals the Self-Insurance Amount from Table 2 divided by the Annual Aggregate Amount from Table 2 based on the number of tanks for which this financial test is used.

- (9) Are at least 90 percent of assets located in the U.S.? [If "No," complete line 10.] _____

- (10) Is line 7 at least (X) times line 3? _____

(X) equals the Self-Insurance Amount from Table 2 divided by the Annual Aggregate Amount from Table 2 based on the number of tanks for which this financial test is used.

[Fill in either lines 11-14 or lines 15-17:]

- (11) Current assets\$ _____
- (12) Current liabilities\$ _____
- (13) Net working capital [subtract line 12 from line 11]\$ _____

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

Yes No

(14) Is line 13 at least (X) times line 3?

(X) equals the Self-Insurance Amount from Table 2 divided by the Annual Aggregate Amount from Table 2 based on the number of tanks for which this financial test is used.

(15) Current bond rating of most recent bond issue.....

(16) Name of rating service.....

(17) Date of maturity of bond

(18) Have financial statements for the latest fiscal year been filed with the SEC, the Energy Information Administration, or the Rural Electrification Administration?

[If "No," please attach a report from an independent certified public accountant certifying that there are no material differences between the data as reported in lines 4-18 above and the financial statements for the latest fiscal year.]

[For both Alternative I and Alternative II complete the certification with this statement.]

I hereby certify that the wording of this letter is identical to the wording specified in rule 1200—1—15—.08(6)(d) as such regulations were constituted on the date shown immediately below.

[Signature] [Name] [Title] [Date]

(e) If an owner or operator using the financial test of self-insurance to provide financial assurance finds that he or she no longer meets the requirements of the financial test based on the year-end financial statements, the owner or operator must obtain alternative coverage within 150 days of the end of the year for which financial statements have been prepared.

(f) The Commissioner may require reports of financial condition at any time from the owner or operator, and/or guarantor. If the Commissioner finds, on the basis of such reports or other information, that the owner or operator, and/or guarantor, no longer meets the financial test requirements of rule 1200—1—15—.08(6)(b) or (c) and (d), the owner or operator must obtain alternate coverage within 30 days after notification of such a finding.

(g) If the owner or operator fails to obtain alternate assurance within 150 days of finding that he or she no longer meets the requirements of the financial test based on the year-end financial statements, or within 30 days of notification by the Commissioner that he or she no longer meets the requirements of the financial test, the owner or operator must notify the Commissioner of such failure within 10 days.

(7) Guarantee

(a) An owner or operator may satisfy the requirements of rule 1200—1—15—.08(4) by obtaining a guarantee that conforms to the requirements of this paragraph. The guarantor must be:

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

1. A firm that:
 - (i) possesses a controlling interest in the owner or operator;
 - (ii) possesses a controlling interest in a firm described under (1)(i); or
 - (iii) is controlled through stock ownership by a common parent firm that possesses a controlling interest in the owner or operator; or
 2. A firm engaged in a substantial business relationship with the owner or operator and issuing the guarantee as an act incident to that business relationship.
- (b) Within 120 days of the close of each financial reporting year the guarantor must demonstrate that it meets the financial test criteria of rule 1200—1—15—.08(6) based on year-end financial statements for the latest completed financial reporting year by completing the letter from the chief financial officer described in rule 1200—1—15—.08(6)(d) and must deliver the letter to the owner or operator. If the guarantor fails to meet the requirements of the financial test at the end of any financial reporting year, within 120 days of the end of that financial reporting year the guarantor shall send by certified mail, before cancellation or nonrenewal of the guarantee, notice to the owner or operator. If the Commissioner notifies the guarantor that he no longer meets the requirements of the financial test of rule 1200—1—15—.08(6)(b) or (c) and (d), the guarantor must notify the owner or operator within 10 days of receiving such notification from the Commissioner. In both cases, the guarantee will terminate no less than 120 days after the date the owner or operator receives the notification, as evidenced by the return receipt. The owner or operator must obtain alternate coverage as specified in rule 1200—1—15—.08(20).
- (c) The guarantee must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

GUARANTEE

Guarantee made this [date] by [name of guaranteeing entity], a business entity organized under the laws of the state of [name of state], herein referred to as guarantor, to the State of Tennessee, Department of Health and Environment and to any and all third parties, and obligees, on behalf of [owner or operator] of [business address].

Recitals.

- (1) Guarantor meets or exceeds the financial test criteria of rule 1200—1—15—.08(6)(b) or (c) and (d) and agrees to comply with the requirements for guarantors as specified in rule 1200—1—15—.08(7)(b).
- (2) [Owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility, the name(s) and address(es) of the facility(ies) where the tanks are located, and the facility identification number(s). If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to rule 1200—1—15—.02(3) and the name and address of the facility.] This guarantee satisfies rule 1200—1—15—.08 requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage" caused by accidental releases; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(Rule 1200—1—15—.08, continued)

- (3) [Insert appropriate phrase: "On behalf of our subsidiary" (if guarantor is corporate parent of the owner or operator); "On behalf of our affiliate" (if guarantor is a related firm of the owner or operator); or "Incident to our business relationship with" (if guarantor is providing the guarantee as an incident to a substantial business relationship with owner or operator)] [owner or operator], guarantor guarantees to the Department and to any and all third parties that: In the event that [owner or operator] fails to provide alternate coverage within 60 days after receipt of a notice of cancellation of this guarantee and the Commissioner has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the Commissioner, shall fund a standby trust fund in accordance with the provisions of rule 1200—1—15—.08(18), in an amount not to exceed the coverage limits specified above. In the event that the Commissioner determines that [owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with rule 1200—1—15—.06, the guarantor upon written instructions from the Commissioner shall fund a standby trust in accordance with the provisions of rule 1200—1—15—.08(18), in an amount not to exceed the coverage limits specified above. If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the Commissioner, shall fund a standby trust in accordance with the provisions of rule 1200—1—15—.08(18) to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.
- (4) Guarantor agrees that if, at the end of any fiscal year or financial reporting year before cancellation of this guarantee, the guarantor fails to meet the financial test criteria of rule 1200—1—15—.08(6)(b) or (c) and (d), guarantor shall send within 120 days of such failure, by certified mail, notice to [owner or operator]. The guarantee will terminate 120 days from the date of receipt of the notice by [owner or operator], as evidenced by the return receipt.
- (5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.
- (6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to Chapter 1200—1—15.
- (7) Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable financial responsibility requirements of rule 1200—1—15—.08 for the above-identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.
- (8) The guarantor's obligation does not apply to any of the following:
 - (a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
 - (b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];
 - (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank; or
 - (e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of rule 1200—1—15—.08(4).
- (9) Guarantor expressly waives notice of acceptance of this guarantee by the Department, by any or all third parties, or by [owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in rule 1200—1—15—.08(7)(c) as such regulations were constituted on the effective date shown immediately below.

Effective date: _____

[Name of guarantor]
 [Authorized signature for guarantor]
 [Name of person signing]
 [Title of person signing]

Signature of witness or notary: _____

- (d) An owner or operator who uses a guarantee to satisfy the requirements of rule 1200—1—15—.08(4) must establish a standby trust fund when the guarantee is obtained. Under the terms of the guarantee, all amounts paid by the guarantor under the guarantee will be deposited directly into the standby trust fund in accordance with instructions from the Commissioner under rule 1200—1—15—.08(18). This standby trust fund must meet the requirements specified in rule 1200—1—15—.08(13).
- (8) Insurance and Risk Retention Group Coverage
- (a) An owner or operator may satisfy the requirements of rule 1200—1—15—.08(4) by obtaining liability insurance that conforms to the requirements of this paragraph from a qualified insurer or risk retention group. Such insurance may be in the form of a separate insurance policy or an endorsement to an existing insurance policy.
 - (b) Each insurance policy must be amended by an endorsement worded as specified in part 1. or evidenced by a certificate of insurance worded as specified in part 2., except that instructions in brackets must be replaced with the relevant information and the brackets deleted:

UNDERGROUND STORAGE TANK PROGRAM

(Rule 1200—1—15—.08, continued)

1. ENDORSEMENT

Name: [name of each covered location] _____

Address: [address of each covered location] _____

Policy Number: _____

Period of Coverage: [current policy period] _____

Name of [Insurer or Risk Retention Group]: _____

Address of [Insurer or Risk Retention Group]: _____

Name of Insured: _____

Address of Insured: _____

Endorsement:

- (i) This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering the following underground storage tanks:

[List the number of tanks at each facility, the name(s) and address(es) of the facility(ies), and the facility identification number(s) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to rule 1200—1—15—.02(3) and the name and address of the facility.]

For [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage" caused by accidental release; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

(ii) The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions inconsistent with items (I) through (V) of this subpart (ii) are hereby amended to conform with items (I) through (V):

- (I) Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this endorsement is attached.
- (II) The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in rule 1200—1—15—.08(6) through rule 1200—1—15—.08(12).
- (III) Whenever requested by the Commissioner, the ["Insurer" or "Group"] agrees to furnish to the Commissioner a signed duplicate original of the policy and all endorsements.
- (IV) Cancellation or any other termination of the insurance by the ["Insurer" or "Group"] except for non-payment of premium or misrepresentation by the insured will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of ten (10) days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

(V) The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Group"] within six (6) months of the effective date of cancellation or non-renewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.

I hereby certify that the wording of this instrument is identical to the wording in rule 1200—1—15—.08(8)(b) 1. and that the ["Insurer" or "Group"] is ["licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in the State of Tennessee"].

[Signature of authorized representative of Insurer or Risk Retention Group] [Name of person signing]
[Title of person signing], Authorized Representative of [name of Insurer or Risk Retention Group]
[Address of Representative]

2. CERTIFICATE OF INSURANCE

Name: [name of each covered location] _____

Address: [address of each covered location] _____

Policy Number: _____

UNDERGROUND STORAGE TANK PROGRAM

(Rule 1200—1—15—.08, continued)

Endorsement (if applicable): _____

Period of Coverage: [current policy period] _____

Name of [Insurer or Risk Retention Group]: _____

Address of [Insurer or Risk Retention Group]: _____

Name of Insured: _____

Address of Insured: _____

Certification:

(i) [Name of Insurer or Risk Retention Group], [the "Insurer" or "Group"], as identified above, hereby certifies that it has issued liability insurance covering the following underground storage tank(s):

[List the number of tanks at each facility, the facility identification number(s), and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to rule 1200—1—15—.02(3), and the name and address of the facility.]

For [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage" caused by accidental releases; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

(ii) The ["Insurer" or "Group"] further certifies the following with respect to the insurance described in Paragraph 1:

(i) Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this certificate applies.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

- (II) The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in rule 1200—1—15—.08(6) through rule 1200—1—15—.08(12).
- (III) Whenever requested by the Commissioner, the ["Insurer" or "Group"] agrees to furnish to the Commissioner a signed duplicate original of the policy and all endorsements.
- (IV) Cancellation or any other termination of the insurance by the ["Insurer" or "Group"] except for nonpayment of premium or misrepresentation by the insured, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for nonpayment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of ten (10) days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

- (V) The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Group"] within six (6) months of the effective date of the cancellation or non-renewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.

I hereby certify that the wording of this instrument is identical to the wording in rule 1200—1—15—.08(8)(b)2. and that the ["Insurer" or "Group"] is ["licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer in the state of Tennessee"].

[Signature of authorized representative of Insurer]

[Type name]

[Title], Authorized Representative of [name of Insurer or Risk Retention Group]

[Address of Representative]

- (c) Each insurance policy must be issued by an insurer or a risk retention group that, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in the state of Tennessee.
- (9) Surety Bond
- (a) An owner or operator may satisfy the requirements of rule 1200—1—15—.08(4) by obtaining a surety bond that conforms to the requirements of this paragraph. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in the latest Circular 570 of the U.S. Department of the Treasury.
- (b) The surety bond must be worded as follows, except that instructions in brackets must be replaced with the relevant information and the brackets deleted:

(Rule 1200—1—15—.08, continued)

PERFORMANCE BOND

Date bond executed: _____

Period of coverage: _____

Principal: (legal name and business address of owner or operator) _____

Type of organization: (insert "individual," "joint venture," "partnership," or "corporation") _____

State of incorporation (if applicable): _____

Surety(ies): (name(s) and business address(es)) _____

Scope of Coverage: [List the number of tanks at each facility, the facility identification number(s), and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to rule 1200—1—15—.02(3), and the name and address of the facility. List the coverage guaranteed by the bond: "taking corrective action" and/or "compensating third parties for bodily injury and property damage" caused by accidental releases arising from operating the underground storage tank"].

Penal sums of bond: Per occurrence \$ _____

Annual aggregate \$ _____

Surety's bond number: _____

Know All Persons by These Presents, that we, the Principal and Surety(ies), hereto are firmly bound to the Department of Health and Environment, in the above penal sums for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sums jointly and severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sums.

Whereas said Principal is required under Tennessee Petroleum Underground Storage Tank Act to provide financial assurance for (insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage" caused by accidental releases; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location) arising from operating the underground storage tanks identified above, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully ("take corrective action, in accordance with rule 1200—1—15—.06 and the Commissioner's instructions for," and/or "compensate injured third parties for bodily injury and property damage" caused by accidental releases arising from operating the tank(s) identified above, or if the Principal shall provide alternate financial assurance, as specified in rule 1200—1—15—.08, within 120 days after the date the notice of cancellation is received by the Principal from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

Such obligation does not apply to any of the following:

1. Any obligation of (insert owner or operator) under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
2. Bodily injury to an employee of (insert owner or operator) arising from, and in the course of, employment by (insert owner or operator);
3. Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
4. Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by (insert owner or operator) that is not the direct result of a release from a petroleum underground storage tank; or
5. Bodily injury or property damage for which (insert owner or operator) is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of rule 1200—1—15—.08(4).

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the Commissioner that the Principal has failed to ("take corrective action, in accordance with rule 1200—1—15—.06 and the Commissioner's instructions;" and/or "compensate injured third parties") as guaranteed by this bond, the Surety(ies) shall either perform ("corrective action in accordance with rule 1200—1—15—.06 and the Commissioner's instructions;" and/or "third-party liability compensation") or place funds in an amount up to the annual aggregate penal sum into the standby trust fund as directed by the Commissioner under rule 1200—1—15—.08(18).

Upon notification by the Commissioner that the Principal has failed to provide alternate financial assurance within 60 days after the date the notice of cancellation is received by the Principal from the Surety(ies) and that the Commissioner has determined or suspects that a release has occurred, the Surety(ies) shall place funds in an amount not exceeding the annual aggregate penal sum into the standby trust fund as directed by the Commissioner under rule 1200—1—15—.08(18).

The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the annual aggregate to the penal sum shown on the face of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum.

(Rule 1200—1—15—.08, continued)

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by the Principal, as evidenced by the return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies).

In Witness Whereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above. The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in rule 1200—1—15—.08(9)(b) as such regulations were constituted on the date this bond was executed.

PRINCIPAL

(Signature(s)) (Name(s)) (Title(s)) (Corporate seal)

CORPORATE SURETY(IES)

(Name and address) _____

State of Incorporation: _____

Liability limit: \$ _____
 (Signature(s)) (Name(s) and title(s)) (Corporate seal)

(For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.)

Bond premium: \$ _____

- (c) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. In all cases, the surety's liability is limited to the per-occurrence and annual aggregate penal sums.
- (d) The owner or operator who uses a surety bond to satisfy the requirements of rule 1200—1—15—.08(4) must establish a standby trust fund when the surety bond is acquired. Under the terms of the bond, all amounts paid by the surety under the bond will be deposited directly into the standby trust fund in accordance with instructions from the Commissioner under rule 1200—1—15—.08(18). This standby trust fund must meet the requirements specified in rule 1200—1—15—.08(13).

(10) Letter of Credit

- (a) An owner or operator may satisfy the requirements of rule 1200—1—15—.08(4) by obtaining an irrevocable standby letter of credit that conforms to the requirements of this paragraph. The issuing institution must be an entity that has the authority to issue letters of credit in the state of Tennessee and whose letter-of-credit operations are regulated and examined by a federal or state agency.
- (b) The letter of credit must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

IRREVOCABLE STANDBY LETTER OF CREDIT

(Name and address of issuing institution) (Name and address of Commissioner of Tennessee Department of Health and Environment)

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in your favor, at the request and for the account of (owner or operator name) of (address) up to the aggregate amount of (in words) U.S. dollars (\$insert dollar amount), available upon presentation by the Commissioner of

1. your sight draft, bearing reference to this letter of credit, No. _____, and
2. your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of Tennessee Petroleum Underground Storage Tank Act."

This letter of credit may be drawn on to cover (insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage" caused by accidental releases) arising from operating the underground storage tank(s) identified below in the amount of (in words) \$(insert dollar amount) per occurrence and (in words) \$(insert dollar amount) annual aggregate:

(List the number of tanks at each facility, the name(s) and address(es) of the facility(ies), and the facility identification number(s) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to rule 1200—1—15—.02(3) and the name and address of the facility.)

The letter of credit may not be drawn on to cover any of the following:

1. Any obligation of (insert owner or operator) under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
2. Bodily injury to an employee of (insert owner or operator) arising from, and in the course of, employment by (insert owner or operator);
3. Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
4. Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by (insert owner or operator) that is not the direct result of a release from a petroleum underground storage tank; or
5. Bodily injury or property damage for which (insert owner or operator) is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of rule 1200—1—15—.08(4).

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

This letter of credit is effective as of (date) and shall expire on (date), but such expiration date shall be automatically extended for a period of (at least the length of the original term) on (expiration date) and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify (owner or operator) by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event that (owner or operator) is so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by (owner or operator), as shown on the signed return receipt.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of (owner or operator) in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in rule 1200—1—15—.08(10)b as such regulations were constituted on the date shown immediately below.

(Signature(s) and title(s) of official(s) of issuing institution)

(Date)

This credit is subject to (insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce," or "the Uniform Commercial Code").

- (c) An owner or operator who uses a letter of credit to satisfy the requirements of rule 1200—1—15—.08(4) must also establish a standby trust fund when the letter of credit is acquired. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Commissioner will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Commissioner under rule 1200—1—15—.08(18). This standby trust fund must meet the requirements specified in rule 1200—1—15—.08(13).
- (d) The letter of credit must be irrevocable with a term specified by the issuing institution. The letter of credit must provide that credit be automatically renewed for the same term as the original term, unless, at least 120 days before the current expiration date, the issuing institution notifies the owner or operator by certified mail of its decision not to renew the letter of credit. Under the terms of the letter of credit, the 120 days will begin on the date when the owner or operator receives the notice, as evidenced by the return receipt.

(11) Petroleum Underground Storage Tank Fund

- (a) An owner or operator may use the fund to assist with the financial responsibility requirements of rule 1200—1—15—.08(4) for underground storage tanks located in the State of Tennessee after the owner or operator meets fund eligibility requirements described in rule 1200—1—15—.09(4) and (5). The fund will be implemented as described, in rule 1200—1—15—.09. When eligible, monies will be available from the fund to cover costs up to the limits specified in T.C.A. §68—53—111 subject to rule 1200—1—15—.08(20)(d).
- (b) An owner or operator using the fund to meet part of the financial responsibility requirements of Rule 1200—1—15—.08(4) must execute a Fund Applicability Statement worded as follows:

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

FUND APPLICABILITY STATEMENT

This statement certifies that the Tennessee Underground Storage Tank Fund will be used to cover costs from the fund entry level amounts to limits specified in rule 1200—1—15—.08(4) and T.C.A. §68—53—111 subject to rule 1200—1—15—.08(20)(d).

The fund shall be responsible for cleanup costs above the entry level to the fund in an amount not to exceed one million dollars (\$1,000,000) per site per occurrence. The fund shall be responsible for court awards involving third party claims above the entry level into the fund in an amount not to exceed one million dollars (\$1,000,000) per site per occurrence.

[Insert name of owner or operator] guarantees that fund eligibility requirements described in rule 1200—1—15—.09 have been met for the below listed tanks.

[List the number of tanks at each facility, the name(s) and address(es) of the facility(ies), and the facility identification number(s) where the tanks are located. For each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to rule 1200—1—15—.02(3), the name and address of the facility, and the type of instrument which assures financial responsibility to the entry level of the fund.]

The fund is being used for financial assurance for [insert "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by"] accidental releases arising from operating the underground storage tank(s) identified above. Fund dispersment and implementation is described in rule 1200—1—15—.09.

I certify that the wording of this instrument is identical to the wording in rule 1200—1—15—.08(11)(b).

[Signature of authorized representative]

[Type Name]

[Title]

[Date of Execution]

(12) Trust Fund

- (a) An owner or operator may satisfy the requirements of rule 1200—1—15—.08(4) by establishing a trust fund that conforms to the requirements of this paragraph. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency or an agency of the state of Tennessee. The trust fund must be established in the state of Tennessee.
- (b) The wording of the trust agreement must be identical to the wording specified in rule 1200—1—15—.08(13)(b)1., and must be accompanied by a formal certification of acknowledgment as specified in rule 1200—1—15—.08(13)(b)2. and a statement of locations as specified in rule 1200—1—15—.08(12)(g).
- (c) The trust fund, when established, must be funded for the full required amount of coverage, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining required coverage.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

- (d) If the value of the trust fund is greater than the required amount of coverage, the owner or operator may submit a written request to the Commissioner for release of the excess.
- (e) If other financial assurance as specified in this rule is substituted for all or part of the trust fund, the owner or operator may submit a written request to the Commissioner for release of the excess.
- (f) Within 60 days after receiving a request from the owner or operator for release of funds as specified in subparagraphs (d) or (e) of this rule, the Commissioner will instruct the trustee to release to the owner or operator such funds as the Commissioner specifies in writing.
- (g) An owner or operator satisfying the requirements of rule 1200—1—15—.08(4) through the use of a trust fund as set forth in this paragraph shall execute the following statement of locations as worded:

STATEMENT OF LOCATIONS

This statement is in support of the use of the trust fund to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by accidental releases in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by the trust fund by this [insert: "owner or operator"]; [List for each facility: the name and address of the facility where tanks assured by this financial test are located, the number of tanks at each facility, and the facility identification number. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at the facility(ies), list each tank(s) assured by this trust fund by the tank identification number provided in the notification submitted pursuant to rule 1200—1—15—.02(3) and the name and address of the facility(ies).

[Signature of authorized representative]

[Title]

[Date]

(13) Standby Trust Fund

- (a) An owner or operator using any one of the mechanisms authorized by rule 1200—1—15—.08(7), rule 1200—1—15—.08(9), or rule 1200—1—15—.08(10) must establish a standby trust fund when the mechanism is acquired. The trustee of the standby trust fund must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency or an agency of the state of Tennessee. The trust fund must be established in the state of Tennessee.
- (b) 1. The standby trust agreement must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

TRUST AGREEMENT

Trust agreement, the "Agreement," entered into as of (date) by and between (name of the owner or operator), a (name of state) (insert "corporation," "partnership," "association," or "proprietorship"), the "Grantor," and (name of corporate trustee), (insert "Incorporated in the state of _____" or "a national bank"), the "Trustee"

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—08, continued)

(Whereas, the Tennessee Department of Health and Environment, "TDHE" an agency of the state of Tennessee, has established certain regulations applicable to the Grantor, requiring that an owner or operator of an underground storage tank shall provide assurance that funds will be available when needed for corrective action and third-party compensation for bodily injury and property damage caused by accidental releases arising from the operation of the underground storage tank (This paragraph is only applicable to the standby trust agreement.));

(Whereas, the Grantor has elected to establish (insert either "a guarantee," "surety bond," or "letter of credit") to provide all or part of such financial assurance for the underground storage tanks identified herein and is required to establish a standby trust fund able to accept payments from the instrument (This paragraph is only applicable to the standby trust agreement.));

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee;

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definition

As used in this Agreement:

- (a) The term "Commissioner" means the Commissioner of Health and Environment, his authorized representatives, or in the event of his absence or a vacancy in the Commissioner's office, the Deputy Commissioner.
- (b) The term "Department" means Tennessee Department of Health and Environment.
- (c) The term "Fund" means trust fund.
- (d) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.
- (e) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of the Financial Assurance Mechanism

This Agreement pertains to the (identify the financial assurance mechanism, either a guarantee, surety bond, or letter of credit, from which the standby trust fund is established to receive payments (This paragraph is only applicable to the standby trust agreement.)).

Section 3. Establishment of Fund

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the Department. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. (The Fund is established initially as a standby to receive payments and shall not consist of any property.) Payments made by the provider of financial assurance pursuant to the Commissioner's instruction are transferred to the Trustee and are referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor as provider of financial assurance, any payments necessary to discharge any liability of the Grantor established by the Department.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

Section 4. Payment for ("Corrective Action" and/or "Third Party Liability Claims")

The Trustee shall make payments from the Fund as the Commissioner shall direct, in writing, to provide for the payment of the costs of (insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases") arising from operating the tanks covered by the financial assurance mechanism identified in this Agreement.

The Fund may not be drawn upon to cover any of the following:

- (a) Any obligation of (insert owner or operator) under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of (insert owner or operator) arising from, and in the course of, employment by (insert owner or operator);
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by (insert owner or operator) that is not the direct result of a release from a petroleum underground storage tank; or
- (e) Bodily injury or property damage for which (insert owner or operator) is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of rule 1200—1—15—.08(4).

The Trustee shall reimburse the Grantor, or other persons as specified by the Commissioner, from the Fund for corrective action expenditures and/or third-party liability claims in such amounts as the Commissioner shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the Commissioner specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund

Payments made to the Trustee for the Fund shall consist of cash and securities acceptable to the Trustee.

Section 6. Trustee Management

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (i) Securities or other obligations of the Grantor, or any other owner or operator of the tanks, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;

(Rule 1200—1—15—.08, continued)

- (ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and
- (iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment

The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;
- (d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the Fund.

(Rule 1200—1—15—.08, continued)

Section 9. Taxes and Expenses

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any questions arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in writing sent to the Grantor and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule B or such other designees as the Grantor may designate by amendment to Schedule B. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Commissioner to the Trustee shall be in writing, signed by the Commissioner, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Commissioner hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Commissioner, except as provided for herein.

Section 14. Amendment of Agreement

This Agreement may be amended by an instrument in writing executed by the Grantor and the Trustee, or by the Trustee and the Commissioner if the Grantor ceases to exist.

UNDERGROUND STORAGE TANK PROGRAM

(Rule 1200—1—15—.08, continued)

Section 15. Irrevocability and Termination

Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written direction of the Grantor and the Trustee, or by the Trustee and the Commissioner, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 16. Immunity and Indemnification

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Commissioner issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law

This Agreement shall be administered, construed, and enforced according to the laws of the state of Tennessee, or the Comptroller of the Currency in the case of National Association banks.

Section 18. Interpretation

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals (if applicable) to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in rule 1200—1—15—.08(13)(b)1. as such regulations were constituted on the date written above.

(Signature of Grantor) (Name of the Grantor) (Title)

Attest:

(Signature of Trustee) (Name of the Trustee) (Title) (Seal)

Attest:

(Signature of Witness) (Name of Witness) (Title) (Seal)

- 2. The standby trust agreement must be accompanied by a formal certification of acknowledgment similar to the following.

State of _____

County of _____

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

On this (date), before me personally came (owner or operator) to me known, who, being by me duly sworn, did depose and say that she/he resides at (address), that she/he is (title) of (corporation), the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that she/he signed her/his name thereto by like order.

(Signature of Notary Public)

(Name of Notary Public)

- (c) The Commissioner will instruct the trustee to refund the balance of the standby trust fund to the provider of financial assurance if the Commissioner determines that no additional corrective action costs or third-party liability claims will occur as a result of a release covered by the financial assurance mechanism for which the standby trust fund was established.
 - (d) An owner or operator may establish one trust fund as the depository mechanism for all funds assured in compliance with this rule.
- (14) Substitution of Financial Assurance Mechanisms by Owner or Operator
- (a) An owner or operator may substitute any alternate financial assurance mechanisms as specified in this rule, provided that at all times he maintains an effective financial assurance mechanism or combination of mechanisms that satisfies the requirements of rule 1200—1—15—.08(4).
 - (b) After obtaining alternate financial assurance as specified in this rule, an owner or operator may cancel a financial assurance mechanism by providing notice to the provider of financial assurance.
- (15) Cancellation or Nonrenewal by a Provider of Financial Assurance
- (a) Except as otherwise provided, a provider of financial assurance may cancel or fail to renew an assurance mechanism by sending a notice of termination by certified mail to the owner or operator.
 1. Termination of a guarantee, a surety bond, or a letter of credit may not occur until 120 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.
 2. Termination of insurance or risk retention group coverage, except for nonpayment or misrepresentation by the insured, or state-funded assurance may not occur until 60 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt. Termination for nonpayment of premium or misrepresentation by the insured may not occur until a minimum of ten (10) days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.
 - (b) If a provider of financial responsibility cancels or fails to renew for reasons other than incapacity of the provider as specified in rule 1200—1—15—.08(16), the owner or operator must obtain alternate coverage as specified in this paragraph within 60 days after receipt of the notice of termination. If the owner or operator fails to obtain alternate coverage within 60 days after receipt of the notice of termination, the owner or operator must notify the Commissioner of such failure and submit:
 1. The name and address of the provider of financial assurance;
 2. The effective date of termination; and
 3. The evidence of the financial assurance mechanism subject to the termination maintained in accordance with rule 1200—1—15—.08(17).

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

(16) Reporting by Owner or Operator

- (a) An owner or operator must submit the appropriate forms listed in rule 1200—1—15—.08(17)(b) documenting current evidence of financial responsibility to the Commissioner:
1. Within 30 days after the owner or operator identifies a release from an underground storage tank required to be reported under rule 1200—1—15—.05(4) or rule 1200—1—15—.06(2);
 2. If the owner or operator fails to obtain alternate coverage as required by this rule, within 30 days after the owner or operator receives notice of:
 - (i) Commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a provider of financial assurance as a debtor,
 - (ii) Suspension or revocation of the authority of a provider of financial assurance to issue a financial assurance mechanism,
 - (iii) Failure of a guarantor to meet the requirements of the financial test,
 - (iv) Other incapacity of a provider of financial assurance; or
 3. As required by rule 1200—1—15—.08(6)(g) and rule 1200—1—15—.08(15).
- (b) An owner or operator must certify compliance with the financial responsibility requirements of this Chapter as specified in the new tank notification form when notifying the Department of the installation of a new underground storage tank under rule 1200—1—15—.02(3).
- (c) The Commissioner may require an owner or operator to submit evidence of financial assurance as described in rule 1200—1—15—.08(17)(b) or other information relevant to compliance with this rule at any time.

(17) Recordkeeping

- (a) Owners or operators must maintain evidence of all financial assurance mechanisms used to demonstrate financial responsibility under this rule for an underground storage tank until released from the requirements of this rule under rule 1200—1—15—.08(19). An owner or operator must maintain such evidence at the underground storage tank site or the owner's or operator's place of business. Records maintained off-site must be made available upon request of the Department.
- (b) An owner or operator must maintain the following types of evidence of financial responsibility:
1. An owner or operator using an assurance mechanism specified in rule 1200—1—15—.08(6) through rule 1200—1—15—.08(12) must maintain a copy of the instrument(s) worded as specified.
 2. An owner or operator using a financial test or guarantee must maintain a copy of the chief financial officer's letter based on year-end financial statements for the most recent completed financial reporting year. Such evidence must be on file no later than 120 days after the close of the financial reporting year.
 3. An owner or operator using a guarantee, surety bond, or letter of credit must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

4. An owner or operator using an insurance policy or risk retention group coverage must maintain a copy of the signed insurance policy or risk retention group coverage policy, with the endorsement or certificate of insurance and any amendments to the agreements.
5. An owner or operator covered by a state fund must maintain on file a copy of evidence of coverage required by the state under rule 1200—1—15—.08(11)(b) and a copy of the current petroleum underground storage tank certificate pursuant to rule 1200—1—15—.10.
6. An owner or operator using an assurance mechanism specified in rule 1200—1—15—.08(6) through rule 1200—1—15—.08(12) must maintain and submit to the Department with the annual tank fee an updated copy of a certification of financial responsibility worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

CERTIFICATION OF FINANCIAL RESPONSIBILITY

(Owner or operator) hereby certifies that it is in compliance with the requirements of rule 1200—1—15—.08.

The financial assurance mechanism(s) used to demonstrate financial responsibility under rule 1200—1—15—.08 is(are) as follows:

(For each mechanism, list the type of mechanism, name of issuer, mechanism number (if applicable), amount of coverage, effective period of coverage and whether the mechanism covers "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases:")

(Signature of owner or operator) (Name of owner or operator) (Title) (Date)

(Signature of witness or notary) (Name of witness or notary) (Date)

The owner or operator must update this certification whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s). A copy of this updated certification is to be submitted to the Department whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s).

(18) Drawing on Financial Assurance Mechanisms

- (a) The Commissioner shall require the guarantor, surety, or institution issuing a letter of credit to place the amount of funds stipulated by the Commissioner, up to the limit of funds provided by the financial assurance mechanism, into the standby trust if:
 1. (i) The owner or operator fails to establish alternate financial assurance within 60 days after receiving notice of cancellation of the guarantee, surety bond, letter of credit, or, as applicable, other financial assurance mechanism; and
 - (ii) The Commissioner determines or suspects that a release from an underground storage tank covered by the mechanism has occurred and so notifies the owner or operator or the owner or operator has notified the Commissioner pursuant to rule 1200—1—15—.05 or Rule 1200—1—15—.06 of a release from an underground storage tank covered by the mechanism; or

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

2. The conditions of subparagraph (b)1. or (b)2. are satisfied.

(b) The Commissioner may draw on a standby trust fund when:

1. The Commissioner makes a final determination that a release has occurred and immediate or long-term corrective action for the release is needed, and the owner or operator, after appropriate notice and opportunity to comply, has not conducted corrective action as required under Rule 1200—1—15—.06 or
- 2: The Commissioner has received either:
 - (i) Certification from the owner or operator and the third-party liability claimant(s) and from attorneys representing the owner or operator and the third-party liability claimant(s) that a third-party liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

CERTIFICATION OF VALID CLAIM

The undersigned, as principals and as legal representatives of (insert owner or operator) and (insert name and address of third-party claimant), hereby certify that the claim of bodily injury (and/or) property damage caused by an accidental release arising from operating (owner's or operator's) underground storage tank should be paid in the amount of \$().

(Signatures)
 Owner or Operator
 Attorney(s) for
 Owner or Operator

Signature(s)
 Claimant(s)
 Attorney(s)
 for Claimant(s)

(Notary) Date

(Notary) Date

or

- (ii) An original or certified copy of a final judgment (enforceable in Tennessee) establishing a judgment against the owner or operator for bodily injury or property damage caused by an accidental release from an underground storage tank covered by financial assurance under this rule.
- (c) If the Commissioner determines that the amount of corrective action costs and third-party liability claims eligible for payment under subparagraph (b) may exceed the balance of the standby trust fund and the obligation of the provider of financial assurance, the first priority for payment shall be corrective action costs necessary to protect human health and the environment. The Commissioner shall pay third-party liability claims in the order in which the Commissioner receives certifications of valid claims under subpart (b)2.(i) and valid final judgments under subpart (b)2.(ii).

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.08, continued)

(19) Release from the Requirements

An owner or operator is no longer required to maintain financial responsibility under this rule for an underground storage tank after the tank has been properly closed or, if corrective action is required, after corrective action has been completed and the tank has been properly closed as required by rule 1200—1—15—.07.

(20) Bankruptcy or Other Incapacity of Owner or Operator or Provider of Financial Assurance

- (a) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming an owner or operator as debtor, the owner or operator must notify the Commissioner by certified mail of such commencement and submit the appropriate forms listed in rule 1200—1—15—.08(17) documenting current financial responsibility.
- (b) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing financial assurance as debtor, such guarantor must notify the owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in rule 1200—1—15—.08(7).
- (c) An owner or operator who obtains financial assurance by a mechanism other than the financial test of self-insurance will be deemed to be without the required financial assurance in the event of a bankruptcy or incapacity of its provider of financial assurance, or a suspension or revocation of the authority of the provider of financial assurance to issue a guarantee, insurance policy, risk retention group coverage policy, surety bond, letter of credit, or state-required mechanism. The owner or operator must obtain alternate financial assurance as specified in this rule within 30 days after receiving notice of such an event. If the owner or operator does not obtain alternate coverage within 30 days after such notification, he must notify the Commissioner.
- (d) Within 30 days after receipt of notification that the Tennessee Petroleum Underground Storage Tank Fund has become incapable of paying for assured corrective action or third-party compensation costs, the owner or operator must obtain alternate financial assurance.

(21) Replenishment of Guarantees, Letters of Credit, or Surety Bonds

- (a) If at any time after a standby trust is funded upon the instruction of the Commissioner with funds drawn from a guarantee, letter of credit, or surety bond, and the amount in the standby trust is reduced below the full amount of coverage required, the owner or operator shall by the anniversary date of the financial mechanism from which the funds were drawn:
 - 1. Replenish the value of financial assurance to equal the full amount of coverage required, or
 - 2. Acquire another financial assurance mechanism for the amount by which funds in the standby trust have been reduced.
- (b) For purposes of this paragraph, the full amount of coverage required is the amount of coverage to be provided by rule 1200—1—15—.08(4). If a combination of mechanisms was used to provide the assurance funds which were drawn upon, replenishment shall occur by the earliest anniversary date among the mechanisms.

Authority: T.C.A. §§68—53—101 et seq., 68—53—107, 68—53—113 and 4—5—201 et seq. Administrative History: Original rule filed March 1, 1990; effective April 15, 1990. Amendment filed July 3, 1991; effective August 17, 1991.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

1200—1—15—.09 ADMINISTRATIVE GUIDELINES AND PROCEDURES FOR THE TENNESSEE PETROLEUM UNDERGROUND STORAGE TANK FUND.

- (1) Purpose. This chapter is promulgated to establish administrative guidelines and procedures to determine the manner in which disbursements are made from the Tennessee Petroleum Underground Storage Tank Fund and to implement the purposes and objectives of the Tennessee Petroleum Underground Storage Tank Act of 1988.
- (2) Definitions: The following words and terms, when used in this rule, shall have the following meanings unless the context clearly indicates otherwise.
 - (a) "Board" means the petroleum underground storage tank board established in T.C.A. §68—53—112.
 - (b) "Commissioner" means the Commissioner of Health and Environment, his authorized representatives, or in the event of his absence or a vacancy in the Commissioner's office, the Deputy Commissioner.
 - (c) "Connected piping" means all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which petroleum flows. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them.
 - (d) "Consumption" with respect to heating oil means consumed on the premises where stored.
 - (e) "Corrective Action" means any activity, including but not limited to evaluation, planning, design, engineering, construction, and ancillary service, which is carried out in response to any discharge, release, or threatened release of petroleum.
 - (f) "Corrective Action Contractor" means a person who is carrying out any corrective action, including a person retained or hired by such person to provide services relating to a corrective action.
 - (g) "De Minimis" means very low concentrations of petroleum.
 - (h) "Department" means the Tennessee Department of Health and Environment.
 - (i) "Director" means the Director of the Division.
 - (j) "Division" means the Division designated by the Commissioner of the Department of Health and Environment as the agency to implement the Underground Storage Tank Program in Tennessee.
 - (k) "Eligible owner" means an owner or operator that is in "Substantial Compliance" as defined in subparagraph (hh) of this paragraph.
 - (l) "Farm tank" is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations.
 - (m) "Flow-through process tank" means a tank whose principal use is not for storage but is used in the manufacture of a product or in a treatment process. A flow through process tank forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

(Rule 1200—1—15—.09, continued)

- (n) "Free product" refers to a petroleum that is present as a nonaqueous phase liquid (e.g., liquid not dissolved in water).
- (o) "Fund" means the petroleum underground storage tank fund established under *T.C.A. §68—53—110* unless the context clearly indicates otherwise.
- (p) "Gathering lines" means any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations.
- (q) "Ground water" means water below the land surface in a zone of saturation.
- (r) "Heating oil" means petroleum that is No. 1, No. 2, No. 4—light, No. 4—heavy, No. 5—light, No. 5—heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.
- (s) "Hydraulic lift tanks" means a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.
- (t) "Liquid trap" means sumps, well cellars, and other traps used in association with oil and gas production, gathering, and extraction operations (including gas production plants), for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream.
- (u) "Noncommercial purposes" with respect to motor fuel means not for resale.
- (v) "On the premises where stored" with respect to heating oil means UST systems located on the same property where the stored heating oil is used.
- (w) "Operator" means any person in control of, or having responsibility for, the daily operation of the petroleum underground storage tank.
- (x) "Owner" means:
 1. For petroleum storage tanks in use or brought into use on or after November 8, 1984, any person who owns a petroleum underground storage tank used for the storage, use, or dispensing of petroleum products.
 2. For petroleum underground storage tanks used prior to November 8, 1984, but no longer in use after that date, the person who last owned the petroleum underground storage tank used for storage, use, or dispensing of petroleum immediately before discontinuation of its use.
- (y) "Person" means any and all persons, including individuals, firms, partnerships, associations, public or private institutions, state and federal agencies, municipalities or political subdivisions, or officers thereof, departments, agencies or instrumentalities, or public or private corporations or officers thereof, organized or existing under the laws of this or any other state or country.
- (z) "Petroleum" means crude oil or any fraction thereof that is liquid at standard temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute). The term petroleum includes but is not limited to petroleum and petroleum based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

- (aa) "Pipe" or "Piping" means a hollow cylinder or tubular conduit that is constructed of non-earthen materials.
- (bb) "Pipeline facilities (including gathering lines)" are new and existing pipe rights-of-way and any associated equipment, facilities, or buildings.
- (cc) "Reasonable cost" means that monetary amount or range, as determined by the Department, to be commensurate with a corrective action. The Department's determination is based on an evaluation of typical costs expected for the particular corrective action under review considering the scope and complexity of the activities involved.
- (dd) "Release" means any spilling, overfilling, leaking, emitting, discharging, escaping, leaching or disposing of a petroleum substance from an UST or its associated piping into groundwater, surface water or subsurface soils.
- (ee) "Residential tank" is a tank located on property used primarily for dwelling purposes.
- (ff) "Septic tank" is a water-tight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tanks are pumped out periodically and hauled to a treatment facility.
- (gg) "Storm-water or wastewater collection system" means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.
- (hh) "Substantial Compliance" shall mean that an owner or operator of an underground storage tank has registered that tank with the Division, has timely paid all annual tank fees, and has complied with the requirements of rule 1200—1—15—.02(1) through rule 1200—1—15—.07(5).
- (ii) "Surface impoundment" is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well.
- (jj) "Tank" is a stationary device designed to contain an accumulation of petroleum and constructed of non-earthen materials (e.g., wood, concrete, steel, fiberglass) that provide structural support.
- (kk) "Third Party Claim" means any civil action brought or asserted by any person other than the Department or EPA against any owner or operator of any underground storage tank for damages to person or property which damages are the direct result of contamination by petroleum released from a petroleum underground storage tank.
- (ll) "Underground area" means an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tanks situated on or above the surface of the floor.
- (mm) "Underground release" means any below ground release.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

- (nn) "Underground storage tank" or "UST" means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of petroleum, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any:
1. Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for non-commercial purposes;
 2. Tank used for storing heating oil for consumption on the premises where stored;
 3. Septic tank;
 4. Pipeline facility (including gathering lines) regulated under:
 - (i) The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.), or
 - (ii) The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.), or
 - (iii) State laws comparable to the provisions of law in Subparts (i) or (ii) above if it is an intrastate pipeline;
 5. Surface impoundment, pit, pond, or lagoon;
 6. Storm-water or wastewater collection system;
 7. Flow-through process tank;
 8. Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or
 9. Storage tanks situated in an underground area (such as a basement, cellar, mine working, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor; and
 10. Piping connected to any of the above exclusions.
- (oo) "UST System" or "Tank system" means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.
- (pp) "Wastewater treatment tank" means a tank that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods.
- (qq) "Waters" means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters. [Acts 1971, ch. 164, §3; 1977, ch. 366, §1; T.C.A. §70—326; Acts 1984, ch. 804, §1.]
- (3) Applicability. Requirements of this rule apply to all owners and operators of an underground storage tank system as defined in rule 1200—1—15—.09(2) except as otherwise provided for in rule 1200—1—15—.01(1)(b), rule 1200—1—15—.10(3)(e), and rule 1200—1—15—.11(3)(d).

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

(4) Fund Eligibility Requirements

- (a) Every owner of an UST is required to register that tank with the Division. The owner and/or operator is required to annually pay the required fee for each tank described in rule 1200—1—15—.10(2) and rule 1200—1—15—.10(6)(c). Owners and/or operators satisfying the requirements of this paragraph will have established Fund eligibility. Before the owner and/or operator will receive Fund benefit, the applicable entry level amount to the Fund must be expended as approved costs by the owner and/or operator and/or financial assurance provider. The applicable entry level is the entry level in effect the date the release is reported to the Department.

If the date of release was prior to July 1, 1988, the owner and/or operators are not eligible to receive Fund benefit. If the date of release was between July 1, 1988 and June 30, 1989, the per occurrence entry level for corrective action is seventy-five thousand dollars (\$75,000) and the per occurrence entry level for third party compensation is one hundred fifty thousand dollars (\$150,000). If the date of release was between July 1, 1989 and April 30, 1990 the per occurrence entry level for corrective action is fifty thousand dollars (\$50,000) and the per occurrence entry level for third party compensation is one hundred fifty thousand dollars (\$150,000).

- (b) Every owner or operator of an UST is required to maintain Fund eligibility. Requirements to maintain eligibility are as follows:

1. The owner or operator shall remain in substantial compliance for each UST. If a UST does not remain in substantial compliance, the owner or operator is not eligible for Fund benefits for the site containing the non-complying UST.
2. Annual payment of Underground Storage Tank Fees are required for each UST until such time as permanent closure or change-in-service requirements of rule 1200—1—15—.07(2) through rule 1200—1—15—.07(5) are satisfied.
3. The owner or operator shall maintain the records as required in Chapter 1200—1—15 and submit or make them available to the Division upon request or as directed in regulation.
4. All records maintained as required in subparagraph (b)3. above shall be retained by the owner and/or operator until one of the following is accomplished:
 - (i) Closure requirements of rule 1200—1—15—.07(2) through 1200—1—15—.07(5) are satisfied;
 - (ii) Ownership of an UST, and all records pertaining thereto, are transferred to a new owner; or
 - (iii) Owner or operator is instructed otherwise by the Division.

(5) Loss and Restoration of Fund Eligibility

- (a) If at the time of discovery of a release, the Division determines that an owner or operator has failed to establish Fund eligibility in accordance with subparagraph (4)(a), corrective action costs and/or third party damages associated with that release are not eligible for coverage by the Fund.
- (b) If at any time the Division determines that an owner or operator has failed to maintain Fund eligibility, the Division will provide notice to the owner or operator of such non-compliance. The owner or operator shall have thirty (30) days from receipt of such notice to provide evidence of compliance with all Fund eligibility requirements or such other time period as the Division may allow. If, after this time period, the owner or operator fails to resolve the non-compliance, the Director shall issue a Notice of Fund Ineligibility and enforcement actions which may include penalty assessment may be initiated. The owner or operator shall have 60 days from receipt of Notice of Fund Ineligibility to place in force alternate financial assurance required in rule 1200—1—15—.08(4) and rule 1200—1—15—.08(15).

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

- (c) An owner or operator that has been issued a Notice of Fund Ineligibility must resolve the non-compliance to the satisfaction of the Division for Fund eligibility to be restored. Within thirty (30) days of resolution of the non-compliance, the Division will notify the owner or operator of the date that Fund eligibility was restored. It is the responsibility of the owner or operator to provide evidence of compliance to the Division. The Fund will not cover either investigative or corrective action costs or third party liability claims associated with a release which occurred during the time of Fund ineligibility.
- (6) Annual Fee Assessment
- (a) As part of the eligibility requirements to participate in the liability limitations and reimbursement benefits of the Fund, an UST owner or operator shall pay an annual Tank Fee set by the Board.
- (b) Each year UST owners or operators will be notified by the Division of the amount of the required Tank Fee.
- (7) Authorized Disbursements From the Fund
- (a) Whenever in the Commissioner's determination, an eligible owner or operator has a release of petroleum from an underground storage tank and the owner or operator has been found to be eligible for Fund coverage, the Department shall, subject to the provisions of this rule, disburse monies available in the Fund to provide for:
1. Emergency response activities, investigation, and assessment of sites contaminated by a release of petroleum in accordance with the requirements of rule 1200—1—15—.05 through 1200—1—15—.06.
 2. The rehabilitation of sites contaminated by a release of petroleum, which may consist of clean-up of affected soil and groundwater, using cost effective alternatives that are technologically feasible and reliable, and that provide adequate protection of the public health, safety and welfare and minimize environmental damage, in accordance with corrective action requirements of rule 1200—1—15—.06.
 3. The interim replacement and permanent restoration of potable water supplies;
- (b) Monies held in the Fund may be disbursed for making payments to third parties who bring suit relative to a UST release against the owner or operator of an UST who is eligible for Fund coverage when such third party obtains a final judgment in that action enforceable in Tennessee.
- (c) Costs incurred by the Division in the administration of the provisions of this rule or authorized under *T.C.A. §68—53—101 et seq.* shall be charged to the Fund.
- (d) The fund shall be available to the Board and the Commissioner for expenditures for the purposes of providing for the investigation, identification, and for the reasonable and safe cleanup, including monitoring and maintenance of petroleum sites within the state as provided in *T.C.A. §68—53—101 et seq.*
- (e) The commissioner may enter into contracts and use the fund for those purposes directly associated with identification, investigation, containment and cleanup, including monitoring and maintenance prescribed above including:
1. Hiring consultants and personnel;
 2. Purchase, lease or rental of necessary equipment; and
 3. Other necessary expenses.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

(8) Scope of Fund Coverage

- (a) The Fund will provide to eligible UST owners or operators coverage for the cost of corrective actions and for compensation of third parties for bodily injury and property damage resulting from accidental releases arising from the operation of an UST which stores petroleum.
- (b) Owner or operators of USTs who are eligible for Fund coverage must meet the per site per occurrence financial responsibility requirements specified in parts 1., 2., or 3. and illustrated in Table 3.
1. If the date of release was between July 1, 1988 and June 30, 1989, the financial responsibility requirements for eligible UST owners or operators for taking corrective action will be seventy-five thousand dollars (\$75,000) and compensation of third parties will be one hundred fifty thousand dollars (\$150,000).
 2. If the date of release was between July 1, 1989 and April 30, 1990, the financial responsibility requirements for eligible UST owners or operators for taking corrective actions will be fifty thousand dollars (\$50,000) and compensation of third parties will be one hundred fifty thousand dollars (\$150,000).
 3. If the date of release was on or after May 1, 1990, the financial responsibility requirements for eligible UST owners or operators will be as follows based on the number of tanks owned or operated:
 - (i) 1 to 12 tanks, ten thousand dollars (\$10,000) for taking corrective actions and ten thousand dollars (\$10,000) for compensation of third parties;
 - (ii) 13 to 999 tanks, twenty thousand dollars (\$20,000) for taking corrective actions and thirty-seven thousand five hundred dollars (\$37,500) for compensation of third parties; or
 - (iii) 1,000 or more tanks, fifty thousand dollars (\$50,000) for taking corrective actions and two hundred twenty-five thousand dollars (\$225,000) for compensation of third parties.

In the future the Board may change the owner's or operator's limit of financial responsibility for third party damages per site per occurrence within the limits specified for 13 or more tanks in T.C.A. §68—53—101 *et seq.* if deemed necessary.

TABLE 3
OWNER/OPERATOR FINANCIAL RESPONSIBILITY PER SITE PER OCCURRENCE

DATE OF RELEASE	NUMBER OF TANKS		
	1 - 12 Tanks	13 - 999 Tanks	1000+ Tanks
Prior to July 1, 1988	All costs - Not Fund Eligible	All costs - Not Fund Eligible	All costs - Not Fund Eligible
Between July 1, 1988 and June 30, 1989	\$75,000 Clean-up/ \$150,000 third party	\$75,000 Clean-up/ \$150,000 third party	\$75,000 Clean-up/ \$150,000 third party
Between July 1, 1989 and April 30, 1990	\$50,000 Clean-up/ \$150,000 third party	\$50,000 Clean-up/ \$150,000 third party	\$50,000 Clean-up/ \$150,000 third party
On or After May 1, 1990	\$10,000 Clean-up/ \$10,000 third party	\$20,000 Clean-up \$37,500 third party	\$50,000 Clean-up/ \$225,000 third party

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

- (c) The fund shall be responsible to eligible UST owners or operators for eligible corrective action costs above the entry level to the fund in an amount not to exceed one million dollars (\$1,000,000) per site per occurrence. Likewise, the fund shall be responsible to eligible UST owners or operators for court awards involving third party claims above the entry level into the fund in an amount not to exceed one million dollars (\$1,000,000) per site per occurrence.

(9) Fund Ineligible Costs

- (a) Costs of replacement, repair, maintenance, and/or retrofitting of affected tanks and associated piping and any costs not integral to site rehabilitation shall not be eligible for payment or reimbursement by the Fund. Replacement of asphalt or concrete shall not be eligible for Fund payment or reimbursement.
- (b) The cost of equipment purchases other than routinely required supplies which are expended at a given site or equipment which must be installed at a site to implement a corrective action plan, shall not be charged as a lump sum to the cost of rehabilitating any given site at which Funds are being claimed for containment, investigative, or corrective action costs. Examples of equipment which could not be charged to a specific site would include: drilling rigs, earth moving equipment, groundwater sampling pumps, and photoionization detectors. Examples of equipment which could be charged to a specific site would include: bailers, sample containers, etc. Hourly charges for equipment may be established in the cost proposal submitted for each major phase of work. These hourly rates must be competitive with similar charges by other approved contractors, or they may be rejected by the Division if they are determined to represent unreasonable costs.
- (c) The owner or operator financial responsibility requirements amounts as specified in rule 1200—1—15—.09(8)(b) are not eligible for reimbursement from the Fund. Proof of payment of these initial amounts is required prior to reimbursement of any costs. The owner or operator's financial responsibility requirement for taking corrective actions can not include any cost defined as fund ineligible in subparagraph (a) and (b).

(10) Fund Obligations

- (a) Contingent upon availability of funds the Commissioner will make obligations from the Fund when:
1. A cost proposal for containment, investigative, or corrective actions, submitted in accordance with rule 1200—1—15—.09(11) is approved by the Division.
 2. A judgment for a third party claim is submitted for payment in accordance with rule 1200—1—15—.09(7) and rule 1200—1—15—.09(12).
 3. A payment application is received for containment, investigative, or corrective action work performed from July 1, 1988 until April 15, 1990, subject to a determination of reasonable costs by the Division. Fund eligibility from July 1, 1988 until April 15, 1990 shall be determined by fee payment as required by the Tennessee Petroleum Underground Storage Tank Act.
 4. A payment application is received for initial release response, abatement measures, and initial free product removal under the terms of rule 1200—1—15—.09(11)(c).
 5. A payment application is received and approved by the Division for costs associated with providing an alternate water supply to a person whose water supply has been contaminated by a release of petroleum.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

6. The commissioner or board determines it is necessary to provide for containment, investigation, identification, reasonable and safe cleanup and as otherwise provided in the Tennessee Petroleum Underground Storage Tank Act.
 - (b) If the unobligated balance of the Fund is less than the total amount associated with payment applications, cost proposals and third party judgements which have been accepted by the Commissioner, to the extent allowed by available funds, funds will be obligated in the chronological order in which the claims were submitted, except for the provisions of subparagraph (c)
 - (c) Obligations of funds required for satisfying fund eligible payment applications for work performed under part (a)3. above or judgements for third party claims which were rendered prior to April 15, 1990 for releases discovered from July 1, 1988, until April 15, 1990, will be given priority over payment applications and cost proposals for releases which occur after April 15, 1990.
 - (d) All claims against the fund are clearly obligations only of the fund and not of the state, and any amounts required to be paid under this part are subject to the availability of sufficient monies in the fund. The full faith and credit of the state shall not in any way be pledged or considered to be available to guarantee payment from such fund.
- (11) Requirements for Fund Coverage of Corrective Action Costs . An eligible owner or operator conducting UST corrective actions is entitled to coverage of reasonable costs from the Fund, subject to the following provisions:
 - (a) Upon confirmation of a release in accordance with rule 1200—1—15—.05(3) or after a release from the UST system is identified in any other manner, owners and operators must perform initial response actions required in rule 1200—1—15—.06(2), initial abatement measures required in rule 1200—1—15—.06(3)(a)1. through 4. and rule 1200—1—15—.06(3)(b), and initial free product removal according to rule 1200—1—15—.06(5) and rule 1200—1—15—.06(3)(a)6. necessary to properly stabilize a site and to prevent significant continuing damage to the environment or risk to human health.
 - (b) Upon confirmation and reporting of a release in accordance with the requirement of rule 1200—1—15—.05(1) through rule 1200—1—15—.05(3) the owner or operator must select a contractor from the Division's list of approved contractors if the owner or operator expects to apply for Fund benefits. The Division must be notified in writing of such a selection within fifteen (15) days or other time specified by the Division. A contractual agreement must be established between the owner or operator and the contractor. The Division must be provided a copy of the contractual agreement.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

- (c) If initial release responses, abatement measures and initial free product removal, conducted in accordance with rules 1200—1—15—.06(2) through rule 1200—1—15—.06(5), are required to properly stabilize a site and prevent significant continuing damage to the environment or risk to human health, and the cost of such required measures is expected to exceed ten thousand dollars (\$10,000.00), then the owner or the approved corrective action contractor may contact the Division to obtain verbal or written approval to allow additional expenditures prior to the submittal of a cost proposal. Additional expenditures may be authorized by the Division up to a total of thirty thousand dollars (\$30,000) which may be reimbursable from the Fund to achieve site stabilization and immediate protection of human health or the environment. Such approval may be given following the actual expenditures if immediate actions were necessary to protect human health or the environment and Division personnel were unavailable. In such a case, the Division must be notified of the actions taken within seventy-two hours.
- (d) Following completion of necessary site stabilization actions as described in (c) of this paragraph, subsequent investigative and corrective actions must be performed by approved contractors and in accordance with the requirements of rule 1200—1—15—.06(2) through rule 1200—1—15—.06(7). Further, prior to initiating any of the corrective actions identified in 1. through 5. below, unless otherwise directed by the Division, the owner or operator must, through the assistance of the selected approved contractor, prepare and submit to the Division a cost proposal for conducting the proposed corrective action. Cost proposals shall be submitted in accordance with a format which shall be established by the Division.
1. Preliminary Investigation (Site Check in accordance with rule 1200—1—15—.06(3) through rule 1200—1—15—.06(4)).
 2. Free Product Removal (in accordance with rule 1200—1—15—.06(5)).
 3. Environmental Assessment Plan and Development of Corrective Action Plan (in accordance with rule 1200—1—15—.06(6) through rule 1200—1—15—.06(7)).
 4. Implementation of Corrective Action Plan. (This shall include the costs of: finalizing equipment design; purchase of equipment and materials to be dedicated to the site for corrective action; installation and bringing to operational status the corrective action system; operation and maintenance costs of corrective action system for the total projected time period in which the corrective action system will be needed to comply with corrective action limits of Chapter 1200—1—15, Appendices 3 and 4).
 5. Provision of permanent alternate water supply.
- (e) Upon review of a cost proposal for any of the above activities the Division may:
1. Accept the cost proposal and authorize work to be initiated; or
 2. Request a modification to or clarification of the cost proposal if projected costs are not determined to be reasonable.
- (f) In addition to the above requirements of (d) and (e) of this paragraph, the owner or operator shall upon submittal of a cost proposal for a site investigation, also submit an estimate of the total cost of remediation for the site which shall be used solely for the purpose of the Board and the Division in projecting future funding requirements for the Fund. The total estimated cost of remediation for a site shall be updated by the owner or operator as necessary and as more complete information regarding a site becomes available.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

- (g) Upon acceptance of a cost proposal by the Division, sufficient monies will be obligated from the Fund for completion of the particular phase of work for which the cost proposal was submitted and authorization will be provided for the initiation of the proposed action. Obligation of funds shall be subject to the availability of funds at the time of acceptance of the cost proposal.
 - (h) Corrective actions performed prior to acceptance of an associated cost proposal may not be eligible for reimbursement.
 - (i) If the cost of completing any of the corrective actions of subparagraph (d) 1. through 5., is expected to exceed the amount of an accepted cost proposal, an amended cost proposal must be submitted and accepted to allow additional funds to be obligated.
 - (j) Any corrective action which is carried out in response to any discharge, release, or threatened release of petroleum from an UST must be conducted in accordance with the requirements of rules 1200—1—15—.06(1) through 1200—1—15—.06(7) and subparagraphs (a) through (d) of this paragraph.
 - (k) The owner or operator or the selected corrective action contractor shall keep and preserve detailed records demonstrating compliance with approved investigative and corrective action plans and all invoices and financial records associated with costs for which reimbursement will be requested. These records shall be kept for at least three years after corrective action has been completed for a site.
 - (l) The selected corrective action alternative must be implemented in a manner acceptable to the Division in accordance with an approved plan in order for the owner or operator to be eligible for the reimbursement of costs.
 - (m) An eligible owner or operator conducting UST response actions from July 1, 1988 until April 15, 1990, relative to any discharge, release or threatened release of petroleum from an UST, is entitled to reimbursement of reasonable costs above entry level from the Fund but is exempted from the requirements of subparagraphs (b) through (i) above, provided that corrective actions were carried out in accordance with a plan approved by the Division.
 - (n) If corrective actions which were initiated during the time period referenced in subparagraph (m) above are still continuing on April 15, 1990, the Division may require submittal of cost proposals for any remaining phases of work and for the total projected cost of the remediation.
 - (o) If the contractor performing corrective actions as described in subparagraph (n) above is not an approved contractor, the Division may authorize the continued use of that contractor.
 - (p) If a contractor is performing corrective action at a site prior to development of an approved contractor list, the Division may authorize the continued use of that contractor.
- (12) Requirements for Fund Coverage of Third Party Claims. An eligible owner or operator is entitled to Fund coverage for third party claims resulting from the release of petroleum from an UST, subject to the following provisions:
- (a) The Division was notified by the owner or operator upon the receipt of notice of the third party liability suit;
 - (b) The owner or operator was in substantial compliance at the time the release occurred and at the time the third party suit is filed;

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

- (c) The third party obtains a final judgment enforceable in Tennessee; and
- (d) The final judgment is for an amount greater than the Fund entry level in effect on the day the release was reported to the Department.

(13) Applications for Payment

- (a) Applications for reimbursement for costs of corrective actions shall be submitted on a form established by the Division which shall include an itemization of all charges according to labor hours and rates, analytical charges, equipment charges, and other categories which may be identified by the Division, or which the applicant may wish to provide.
- (b) The application shall contain the following statement which shall be signed by the owner or operator and the project manager of the contracting firm responsible for performance of corrective actions:

I certify to the best of my knowledge and belief: that the costs presented therein represent actual costs incurred in the performance of response actions at this site during the period of time indicated on this application; that an accidental release has occurred from a petroleum underground storage tank system at this site; and that no charges are presented as part of this application that do not directly relate to the performance of corrective actions related to the release of petroleum at this site.

- (c) Applications for payments may be submitted following acceptance by the Division of completed corrective actions. Such corrective actions may include but are not limited to the following:
 1. Completion of site stabilization activities which were authorized by the Division;
 2. Completion and submittal of a report for a Preliminary investigation (site check);
 3. Implementation of a Free Product Removal System;
 4. Development and submittal of an Environmental Assessment Plan;
 5. Implementation of Environmental Assessment as approved in the Environmental Assessment Plan and Development of Remedial Action Plan;
 6. Implementation of Remedial Action Plan; and
 7. Provision of an alternate water supply.
- (d) Applications for payments for the implementation of corrective action may be submitted sixty (60) days following initiation of work to implement the corrective action plan and at sixty (60) day intervals thereafter until completion of the authorized activities. Upon request, the Division may approve interim payments at more frequent intervals.
- (e) All payment shall be subject to approval by the Division. Should a site inspection or other information available to the Division reveal a discrepancy between the work performed and the work addressed by a payment application, the Department may deny payment or may require the Fund to be reimbursed.

UNDERGROUND STORAGE TANK PROGRAM

(Rule 1200—1—15—.09, continued)

- (f) An application for payment must be received within one year from the date of performance or acceptance of the work in order to be eligible for payments from the Fund.
- (g) Except for the situations provided for in rules 1200—1—15—.09(11)(b) and rule 1200—1—15—.09(11)(l), payment shall not be made for corrective actions performed at a site until the Division has reviewed and accepted a cost proposal for that work and until funds have been obligated from the Fund for completion of that particular stage of work.
- (h) For payment of third party claims the UST owner or operator must submit an application to the Division attaching the original or a certified copy of a final judgment (enforceable in Tennessee) with proof of payment of the applicable financial responsibility requirement for compensation of third parties as specified in rule 1200—1—15—.09(8)(b). This application must be received by the Division no later than thirty (30) days after notification of judgment.

(14) Fund Payment Procedures

- (a) Where the owner or operator has submitted an acceptable application for payment for corrective actions or third party claims but has not paid for these activities or claims, payments will be made by a check written to both the eligible owner or operator and the provider of the corrective action services or third party.
- (b) Payments from the Fund will be made directly to the eligible owner or operator in cases where the owner or operator submits documentation verifying the owner or operator has paid in excess of the applicable financial responsibility requirement for taking corrective actions as specified in rule 1200—1—15—.09(8)(b).
- (c) The owner or operator is responsible for final payment to the contractor who performed the corrective actions and for payment of judgments to third parties.
- (d) Contingent upon availability of funds, the Department shall process all applications for payment within forty-five (45) days of receipt of application. If all costs are considered to be reasonable and eligible for reimbursement, payment will be issued within the forty-five (45) day period. If certain costs are considered as not being reasonable or eligible for reimbursement, the Department may issue a check for the amount of the application not in question and provide a fifteen (15) day period in which the owner or operator or contractor may present such information as is necessary to justify the disallowed costs. Following review of such information, the Department may agree to pay the previously disallowed costs, or any portion thereof, or may again disallow the costs for payment.

(15) Approval of Corrective Action Contractors

- (a) The Corrective Action Contractor ("CAC") is the person responsible for conducting and overseeing the corrective action at a petroleum underground storage tank site. There shall be only one CAC for each site.
 - 1. The CAC shall be either:
 - (i) A properly licensed contractor includes general contractors licensed pursuant to *T.C.A.*, Title 62, Chapter 6, engineers, geologists, and other environmental professionals; or
 - (ii) An owner or operator of the petroleum underground storage tank(s) which caused the release of petroleum to the environment, provided that each contractor/subcontractor working for the owner or operator must be a properly licensed contractor pursuant to *T.C.A.* §62—6—101 *et seq.*
- (b) CACs will be approved to perform Fund eligible work upon satisfaction of the following:

(Rule 1200—1—15—.09, continued)

1. The CAC files a written application to become an Approved Corrective Action Contractor with the Division via certified mail or personal service. This application shall be updated annually and include name of CAC, principal(s) of CAC, address(es) of CAC's office, office phone number(s) of CAC, and other information requested by the Division of Underground Storage Tanks.
2. The CAC submits a sworn statement with the written application in part 1., including the following provisions:
 - (i) The CAC will abide by and comply with the Rules and Regulations of the Department of Finance and Administration, Chapter 0620—3—3, Personal Services and Consultant Services Contracts;
 - (ii) The CAC will have written contract(s) with all contractors/subcontractors, and contract(s) shall contain provisions that contractors/subcontractors will abide by and comply with the Rules and Regulations of the Department of Finance and Administration, Chapter 0620—3—3, Personal Services and Consulting Services Contracts. Contract(s) between the CAC and contractors/subcontractors shall also contain provisions that all site workers working under authority of contractors/subcontractors shall have applicable health and safety training when required by the Tennessee Department of Labor;
 - (iii) Site workers working under authority of the CAC will have the applicable health and safety training when required by the Tennessee Department of Labor;
 - (iv) The CAC understands that reimbursement from the Fund will be in accordance with the reasonable rate schedule as established by the Department;
 - (v) If the CAC is not the owner or operator of the tank that caused the release, the CAC will have a written contract with the UST owner and/or operator, and the contract shall contain the following sentence conspicuously located on the first page of the contract:

THE CORRECTIVE ACTION CONTRACTOR WILL/WILL NOT (mark one) USE THE DEPARTMENT'S REASONABLE RATE SCHEDULE WHEN INVOICING THE OWNER OR OPERATOR FOR THE EXPENSES INCURRED IN THE INVESTIGATION AND CLEANUP OF THIS SITE;
 - (vi) If the CAC is the owner or operator of the tank which caused the release, the CAC will have a written contract with all contractors/subcontractors, and the contract shall contain the following sentence conspicuously located on the first page of the contract:

THE CONTRACTOR/SUBCONTRACTOR (mark one) WILL/WILL NOT (mark one) USE THE DEPARTMENT'S REASONABLE RATE SCHEDULE WHEN INVOICING THE OWNER OR OPERATOR FOR THE EXPENSES INCURRED IN THE INVESTIGATION AND CLEANUP OF THIS SITE;
 - (vii) The CAC's services will be performed in a manner consistent with the level of care and skill ordinarily exercised by members of their profession practicing in the State of Tennessee, under similar conditions, and at the time the services were rendered. The CAC shall not knowingly or willfully cause the spread of contamination nor inhibit corrective action at the site;
 - (viii) The CAC will gather and maintain documentation and records necessary for filing a claim with the Tennessee Petroleum Underground Storage Tank Fund;

(Rule 1200—1—15—.09, continued)

- (ix) The CAC will, at a minimum, follow Quality Assurance/Quality Control Standard Operating Procedures supplied by the Division, unless alternate Quality Assurance/Quality Control is approved in writing in advance by the Division;
 - (x) The CAC will assure that the CAC and/or any person the CAC employs or contracts with to engage in the practice of engineering shall be appropriately licensed/registered under the Tennessee Architects, Engineers, and Landscape Architects Law (*T.C.A. §62—2—101 et seq.*);
 - (xi) The CAC will assure that any and all work defined as contracting in Tennessee Contractor's License Law (*T.C.A. §62—6—101 et seq.*) shall be performed by a licensed contractor(s) with appropriate classification and monetary limitation;
 - (xii) The CAC will assure that the CAC and/or any person the CAC employs or contracts with to perform professional geologic work shall be appropriately registered under the Tennessee Geologists Act (*T.C.A. §62—36—101 et seq.*); and
 - (xiii) The CAC will assure that all work done by the CAC had the prior approval of a Registered Professional Engineer or Professional Geologist who is licensed/registered with the Tennessee Department of Commerce and Insurance, and the work was done as specified in chapter 1200—1—15 and/or according to a plan approved by the Division. The CAC will assure that all plans and reports submitted to the Division were prepared and signed by the Registered Professional Engineer or Professional Geologist who prepared or is responsible for the plan or report. The CAC will further assure that a Registered Professional Engineer or Professional Geologist shall make periodic site visits to verify whether or not the work performed was as specified by the Registered Professional Engineer or Professional Geologist, and as specified in chapter 1200—1—15, and/or according to a plan approved by the Division. The CAC shall require a Registered Professional Engineer or Professional Geologist to submit a signed certification based on their personal observation and review of job site records stating whether or not the work was performed as directed by the Registered Professional Engineer or Professional Geologist, and whether or not the work has been performed in accordance with chapter 1200—1—15, and/or a plan approved by the Division. If the work was not performed according to the above specifications, the certification shall include a listing of how the work which was performed varies from chapter 1200—1—15, the approved plan, and/or the authorization of the Registered Professional Engineer or Professional Geologist and the specific reason for each variation. The certification shall be submitted according to a schedule and format determined by the Division.
3. The CAC has any applicable license(s) and registration(s) required in the State of Tennessee; and
- (i) If the CAC is a licensed contractor, the contractor must be properly licensed with an S-Underground Tank Installers, Removal, and Remediation of Pollutants or other applicable classification with a monetary limitation as required under rule 0680—1—.13 and established by the Board for Licensing Contractors of the Tennessee Department of Commerce and Insurance in the amount of at least three hundred fifty thousand dollars (\$350,000). Date of license expiration must be included. The CAC shall submit requirements of this part with the application required in part 1. and must submit documentation of any changes, renewals, renovations, etc. of the CAC's Tennessee license. (There shall be no Fund reimbursement for those expenses which exceed the contractor's monetary limitation.)
 - (ii) All contractors and their subcontractors and employees shall have other applicable license(s) and registration(s).
4. The CAC shall maintain liability insurance coverage of the types and in the amounts described in the Table below, or the equivalent, and shall provide certification to the Division of such coverage with the application described in part 1. and yearly thereafter, or more frequently if necessary to keep the Division updated as to the CAC's current insurance coverage.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

<u>Type of Policy</u>	<u>Limits of Liability</u>	<u>Description</u>
Worker's Compensation	Statutory	All states
Employer's Liability	\$500,000	
Automobile Liability	\$1,000,000 combined single limit (bodily injury and property damages)	All owned, non-owned, and hired vehicles
General Liability	\$1,000,000 combined single limit	Broad Form Comprehensive General Liability

5. The CAC will submit a list of the CAC's employees which will be utilized by the CAC as a part of the assessment and remediation of UST sites in the State of Tennessee. This list shall include each employee's job description, title, office, location, and telephone number. This information shall be submitted with the application described in part 1. and annually thereafter.
- (c) The Department will provide notice that applications are to be requested by publication of a legal advertisement which will provide interested firms with the information necessary to request instructions for preparation and submittal of applications and supporting documentation. Prior to the development of an Approved Corrective Action Contractors list, the Department will contact consulting firms listed on the unendorsed list titled "Professional Consulting Firms - Engineers and Geologists" to notify consulting firms of the requirements of subparagraph (b) above. Applications received within 45 days of the date of legal advertisement shall be reviewed prior to establishing a list of Approved Corrective Action Contractors. Applications and supporting documentation shall be independently evaluated by members of a review committee consisting of Division of Underground Storage Tank staff members according to criteria of subparagraph (b) of this paragraph. Those CAC's satisfactorily meeting the requirements of (b)1. through 5. above shall be placed on the Department's list of UST Approved Corrective Action Contractors. Once a CAC has been approved they will not be required to requalify except under the provisions of subparagraphs (d), (f), and (h) below.
1. Applications received after 45 days from the date of the legal advertisement shall not be reviewed until a list of Approved Corrective Action Contractors is established. These and subsequent applications shall be reviewed by the review committee and either added to the list of Approved CACs or denied Approved CAC status within 90 days of receipt of the completed application with supporting documentation, or establishment of the Approved CAC list, whichever is later.
 2. If the review committee does not approve a CAC and does not place the CAC on the list of Approved CACs, the decision of the review committee may be appealed to the Board.
 3. CAC's who previously submitted applications but did not meet requirements of (b)1. through 5. of this paragraph may submit a subsequent application for review at such time they feel that the requirements of (b)1. through 5. may have been met.
- (d) A CAC will be removed from the Division's Approved CAC list when it has been determined that the CAC has failed to satisfactorily maintain the requirements of subparagraph (b) above or has committed one or more of the violations listed in subparagraph (e) below.
1. The removal process shall be initiated when a complaint is referred to the Division's review committee.
 2. The review committee shall inform the CAC via certified mail of receipt of a complaint.

(Rule 1200—1—15—.09, continued)

3. The Division's review committee may request the CAC to appear at a meeting to show cause why the Department should not remove the CAC from the list of Approved CACs.
4. The CAC may request a meeting with the review committee.
5. The review committee shall notify the CAC of its decision via certified mail a minimum of thirty (30) days after dispatch of the certified letter referenced in part 1. above.
6. If the review committee decides to remove the CAC from the list of Approved CACs, removal shall be effective sixty (60) days after dispatch to the last known address on file with the Division unless:
 - (i) the CAC corrects the non-compliance to the satisfaction of the review committee during the sixty (60) day period; or
 - (ii) the CAC files a written appeal with the Division within the sixty (60) day period requesting a hearing to appeal the decision of the review committee to the Board.
7. The filing of an appeal will postpone actions to remove a CAC from the list of Approved CACs until the appeal is heard by the Board.
8. Once the review committee has dispatched a Notice of Removal to a CAC via certified mail, the Division will approve no additional plans, scopes of work, or cost proposals if such approval will cause Division personnel to violate *T.C.A. §62—6—120(c)(1)*.
9. If an appeal is not filed during the sixty (60) day period, the decision of the review committee will be final.
10. A CAC removed from the Approved CAC list may reapply for approval as provided for in subparts (i) or (ii) below:
 - (i) A CAC who was removed from the Approved CAC list due to failure to satisfactorily maintain the requirements of (b) above may reapply under subparagraphs (b) and (c) above once the requirements of subparagraph (b) have been met.
 - (ii) A CAC who was removed from the Approved CAC list due to one or more of the violations listed in (e) below may reapply after one (1) year. The CAC must submit evidence showing the reasons why the CAC should be reinstated for evaluation by the review committee. The CAC must reapply under the provisions of paragraph (15), subparagraphs (b) and (c) of this rule.
- (e) A CAC may be removed from the list of approved Corrective Action Contractors if it is determined by a review committee consisting of Division staff members that the CAC has done any of the following:
 1. The CAC charged the state or owner/operator for work which was not performed;
 2. The CAC filed false information with the Department;
 3. The CAC has been found guilty of violating any of the following or a comparable law in another jurisdiction:

<ol style="list-style-type: none"> (i) <i>T.C.A. §39—16—503</i> (ii) <i>T.C.A. §39—16—504</i> (iii) <i>T.C.A. §39—14—130</i> (iv) <i>T.C.A. §39—14—114</i> (v) <i>T.C.A. §39—14—104</i> (vi) <i>T.C.A. §39—14—103</i> 	Tampering with or fabricating evidence; Destruction of and tampering with governmental records; Destruction of valuable papers with intent to defraud; Forgery; Theft of services, or Theft of property.
---	---

(Rule 1200—1—15—.09, continued)

4. The CACs or an employee(s), principal(s), or officer(s) of the CAC is found to have engaged in the unauthorized practice of engineering, contracting, or geology under *T.C.A. §§62—2—101 et seq., 62—6—101 et seq., and 62—36—101 et seq.*, or a comparable law in another jurisdiction by the appropriate regulatory agency or court.
5. Due to the quality of work performed by the CAC, the CAC has significantly delayed or inhibited progress in achieving appropriate corrective action at a site(s). This shall include, but shall not be limited to, the following:
 - (i) The CAC performs a non-approved action which spreads contamination in the environment;
 - (ii) The CAC files a plan (e.g. Environmental Assessment Plan, Corrective Action Plan, etc.) which is rejected by the Division as deficient, followed by three subsequent revisions, each of which is rejected by the Division as deficient; or
 - (iii) The CAC fails to supply recommendations for further assessment, remediation, site specific cleanup standards, site closure, or other conclusions supported by the following:
 - (I) The physical and chemical characteristics of petroleum, including its toxicity, persistence, and potential for migration;
 - (II) The hydrogeologic characteristics of the petroleum site and the surrounding land;
 - (III) The proximity, quality, and current and future uses of groundwater;
 - (IV) An exposure assessment;
 - (V) The proximity, quality, and current and future uses of surface waters;
 - (VI) Applicable regulations in chapter 1200—1—15; and
 - (VII) The magnitude and extent of petroleum contamination at the petroleum site and the surrounding land.
 - (iv) The CAC supplies recommendations for further assessment, remediation, site specific cleanup standards, site closure, or other conclusions not supported by items (I) through (VII) listed in subpart (iii) of this part.
6. The CAC filed plan(s) or report(s) which do not bear the appropriate signature and Tennessee license/registration number of a Registered Professional Engineer or Professional Geologist.
7. The CAC performed work which did not have the prior approval of a Registered Professional Engineer or Professional Geologist who is licensed/registered with the Tennessee Department of Commerce and Insurance.
8. The CAC has deviated from an approved plan or scope of work as approved without the approval of the Division. This includes, but is not limited to, the following:
 - (i) Failure to follow Quality Assurance and Quality Control approved in the plan, or
 - (ii) Failure to follow the schedule for implementation approved in the plan.
9. The CAC has failed to follow Quality Assurance/Quality Control (QA/QC) supplied by the Division without having alternate QA/QC approved in advance in writing by the Division.
10. The CAC has failed to follow UST regulations promulgated in chapter 1200—1—15.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.09, continued)

11. The CAC failed to have a Registered Professional Engineer or Professional Geologist file a signed certification according to a schedule and format required by the Division. Said certification shall be based on the Registered Professional Engineer's or Professional Geologist's personal observation and review of job site records. The certification shall state whether or not the work was performed as directed by a Registered Professional Engineer or Professional Geologist, and whether or not the work has been performed in accordance with chapter 1200—1—15, and/or a plan approved by the Division. The certification shall include a listing of how the work performed varies from chapter 1200—1—15, the approved plan, and/or the work approved of the Registered Professional Engineer or Professional Geologist and the specific reason for each variation.
 12. The CAC has failed to annually submit an updated application or a list of the CAC's employees who will be utilized by the CAC as a part of the assessment and remediation of the UST site in the State of Tennessee, including each employee's name, title, job description, office, location, and telephone number.
- (f) No CAC shall be placed on the Approved Corrective Action Contractors list if the CAC is on a list of contractors banned from usage on federally funded projects. If a CAC on the Approved Corrective Action Contractors list is placed on the list of contractors banned from usage on federally funded projects, that CAC will be removed from the Approved Corrective Action Contractors list. When the CAC is removed from the list of contractors banned from usage on federally funded projects, the CAC may apply to be added to the Approved Corrective Action Contractors list according to procedures outlined in subparagraphs (b) and (c) of this paragraph. A CAC on a list of contractors banned from usage on federally funded projects can not work as a subcontractor to an Approved Corrective Action Contractor.
 - (g) The appearance of a CAC on the Division's list of Approved Corrective Action Contractors shall in no way establish liability or responsibility on the part of the Division, the Fund, or the State of Tennessee in regards to the services provided by the CAC or circumstances which may occur as a result of such services.
 - (h) An owner or operator may perform corrective actions for releases of petroleum from USTs he owns or operates provided that he submits an application with documentation as described in subparagraphs (b) and (c) and the application is approved by the Division. The owner or operator may use qualifications of subcontractor(s) in addition to qualifications of the owner or operator in applying for Approved Corrective Action Contractor status. If an owner or operator uses a subcontractor(s) in qualifying for an Approved Corrective Action Contractor classification and there is a change of a subcontractor whose qualifications were used in the application or documentation, then the owner or operator must notify the Division; the owner or operator shall be removed from Approved Corrective Action Contractor status. The owner or operator must submit a new application with documentation and be approved as discussed in subparagraphs (b) and (c) to continue work as an Approved Corrective Action Contractor.
 - (i) A CAC working as a subcontractor under contract to an Approved CAC is not required to be classified as an Approved CAC. The subcontractor must maintain all applicable license(s) and/or registration(s) required in the State of Tennessee for work performed.
- (16) Insufficient Funds
- (a) Nothing in these regulations shall establish liability or responsibility on the part of the Commissioner or state of Tennessee to pay any corrective action costs or third party judgments from any other source than the Fund, nor shall the Commissioner or state of Tennessee have any liability or responsibility to make any payments for corrective action costs or third party judgments if the Fund is insufficient to do so.

(Rule 1200—1—15—.09, continued)

- (b) In the event the Fund is insufficient to make full payments for eligible UST owners or operators taking investigative or corrective actions or for satisfaction of third party judgments, at the time the claim is filed, such claims shall be paid in accordance with the provisions described in rule 1200—1—15—.09(10)(b) and (c).
- (c) The owner of an UST retains responsibility for any liability that cannot be satisfied by the provisions of this rule.
- (d) Within 30 days after receipt of notification that the fund has become incapable of paying for assured corrective action or third party compensation costs, the owner or operator must obtain alternate financial assurance.

(17) Recovery of Costs by State — Apportionment of Liability.

- (a) Making use of any and all appropriate existing state legal remedies, the Commissioner may commence court action to recover the amount expended by the state from any and all responsible parties for each site investigated, identified, contained or cleaned up, including up to the limits of financial responsibility for owners and/or operators of petroleum underground storage tanks covered by the fund and the entire amount from owners and/or operators of petroleum underground storage tanks not covered by the fund.
- (b) In any action under this rule, no responsible party shall be liable for more than that party's apportioned share of the amount expended by the state for such site. The responsible party has the burden of proving his apportioned share. Such apportioned share shall be based solely on the liable party's portion of the total volume of the petroleum at the petroleum site at the time of action under this chapter. Any expenditures required by the provisions of this chapter made by a responsible party (before or after suit) shall be credited toward any such apportioned share.
- (c) In no event shall the total moneys recovered from the responsible party or parties exceed the total expenditure by the state for each site.
- (d) Any party found liable for any costs or expenditures recoverable under this chapter who establishes by a preponderance of evidence that only a portion of such costs or expenditures are attributable to his or her actions shall be required to pay only for such portion.
- (e) If the trier of the fact finds evidence insufficient to establish such party's portion of costs or expenditures in such a cost recovery, the court shall apportion such costs or expenditures among the defendants, to the extent practicable, according to equitable principles.

(18) Failure to Take Proper Action

Any responsible party who fails without sufficient cause to properly provide for removal of petroleum or remedial action upon order of the commissioner pursuant to this chapter may be liable to the state for a penalty in an amount equal to one hundred fifty percent (150%) of the amount of any costs incurred by the state as a result of such failure to take proper action. The Commissioner may recover this penalty in an action commenced under T.C.A. §68—53—115, rule 1200—1—15—.09(17), or in a separate civil action, and such penalty shall be in addition to any costs recovered from such responsible party pursuant to this chapter.

- (19) Severability. If any paragraph, subparagraph, part, subpart, item or subitem of this rule is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this rule shall not be affected thereby.

Authority: T.C.A. §§68—53—107, 68—53—113 and 4—5—201 et seq. *Administrative History:* Original rule filed March 1, 1990; effective April 15, 1990. Amendment filed July 3, 1991; effective August 17, 1991. Amendment filed November 24, 1992; effective January 9, 1993.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

1200—1—15—.10 FEE COLLECTION AND CERTIFICATION ISSUANCE REGULATIONS.

- (1) *Purpose* — The purpose of this rule is to establish a system and schedule for collection of underground storage tank fees.
- (2) *Applicability* — Requirements of this rule apply to the following persons:
 - (a) All owners/operators of petroleum underground storage tanks reported under the requirements of *T.C.A. §68—53—101 et seq.* as follows:
 1. All petroleum underground storage tanks that are actively storing petroleum;
 2. All petroleum underground storage tanks that are reported as in service on July 1 of the current year; and
 3. All petroleum underground storage tanks taken temporarily out of service after June 30, 1988 and have not been properly closed.
 - (b) Rule 1200—1—15—.10 becomes effective July 1, 1990.
- (3) *Annual Petroleum Underground Storage Tank Fees*
 - (a) Any person required to pay a fee under this rule shall submit the fee in the specified amount, with checks made payable to the Department of Health and Environment/Underground Storage Tank Division for deposit in the State Treasury.
 - (b) Any person who is an owner of a petroleum underground storage tank subject to annual fees shall pay the required annual fee unless a notarized agreement signed by the owner and the operator of petroleum underground storage tanks stipulates that the operator shall pay the annual fee. A new agreement must be submitted annually if the operator is to pay the annual fee.
 - (c) The fee schedule provided in this rule shall be based upon the annual financial requirement to operate the petroleum underground storage tank program established pursuant to *T.C.A. §68—53—101 et seq.*
 - (d) The amount of the annual petroleum underground storage tank fee shall be one hundred twenty-five dollars (\$125) per tank.
 - (e) The amount of the annual administrative service fee for agencies and functions of the U.S. Government having sovereign immunity shall be twenty five dollars (\$25) per tank. Agencies and functions of the U.S. Government are not eligible for benefit or financial assistance from the Tennessee Petroleum Underground Storage Tank Fund.
 - (f) Any owner or operator who pays an annual fee on an existing underground storage tank which is subsequently permanently closed in accordance with rule 1200—1—15—.07(2) and replaced by a new underground storage tank installed at the same site in accordance with rule 1200—1—15—.02(1) and 1200—1—15—.02(3) will not be required to pay an additional annual fee.
 - (g) Payment of the entire amount of the annual fee is required for underground storage tanks in service or temporarily out of service during any portion of the current billing year. Tanks placed into service after the current billing year begins or tanks which are permanently closed before the current billing year ends are not due a refund of the annual fee or any portion thereof.
- (4) *Use of the Fee*
 - (a) The annual petroleum underground storage tank fees shall be deposited into the Petroleum Underground Storage Tank Fund and shall be used as specified in the Tennessee Petroleum Underground Storage Tank Act. The use of the fund includes but is not limited to:
 1. Provide a mechanism to assist with the financial responsibility requirements for owners and/or operators of petroleum underground storage tanks, including cleanup of contamination and third party claims due to bodily injury and/or property damage caused by leaking petroleum underground storage tanks.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.10, continued)

- (i) The fund shall provide for cleanup of contamination caused by leaking petroleum underground storage tanks whose owners and/or operators have paid the required petroleum underground storage tank fee. The fund shall be responsible for cleanup costs above the entry level to the fund in an amount not to exceed one million dollars (\$1,000,000). The initial owner and/or operator financial responsibility requirement for clean-up (taking corrective actions) is specified in rule 1200—1—15—.09(8)(b).
- (ii) The fund shall provide coverage for third-party claims involving bodily injury and/or property damage caused by leaking petroleum underground storage tanks whose owners and/or operators have paid the required petroleum underground storage tank fee. The fund shall be responsible for court awards involving third party claims above the entry level into the fund in an amount not to exceed one million dollars (\$1,000,000). The initial owner and/or operator financial responsibility requirements for third party claims involving bodily injury or property damage is specified in rule 1200—1—15—.09(8)(b).

- 2. Provide for administrative costs of implementation of the Petroleum Underground Storage Tank Program.

(5) *Failure to Pay the Annual Petroleum Underground Storage Tank Fee*

- (a) Any petroleum underground storage tank owner/operator who fails to pay the lawfully levied petroleum underground storage tank fee will be assessed a monthly penalty of 5 percent (5%) of the amount. Such penalty shall be assessed monthly until the fee and all associated penalties are paid. The monthly penalty may be waived by the Commissioner upon receipt of documentation justifying late fee payment.
- (b) The Department shall not issue a petroleum underground storage tank certificate to any facility where the owner/operator has failed to pay the lawfully levied petroleum underground storage tank fees. To refuse or fail to pay the Department the annual fee per tank is an unlawful action as described in T.C.A. §68—53—104(3).
- (c) The Department shall revoke the petroleum underground storage tank certificate for any facility for which the owner/operator has failed to pay the lawfully levied petroleum underground storage tank fee(s). Should an owner/operator fail to pay the annual fee(s), following 15 days from the receipt of written notice that the Department intends to remove the certificate, a Division representative may remove the certificate from a facility.
- (d) Upon failure or refusal of an owner and/or operator of a petroleum underground storage tank, subject to fees by regulation, to pay a fee lawfully levied within a reasonable time allowed by the Commissioner, the Commissioner may proceed in the Chancery Court of Davidson County to obtain judgment and seek execution of such judgment.

(6) *Petroleum Underground Storage Tank Annual Fee Notices*

- (a) Prior to the due date of the annual underground storage tank fee, the Division shall issue fee notices to the owner/operator of the petroleum underground storage tanks. Fee notices and due dates shall be staggered using the three grand divisions of the state of Tennessee.
 - 1. Tank fees for underground storage tanks in the following East Tennessee counties shall be due on July 31 of each year:

Johnson, Sullivan, Carter, Washington, Unicoi, Hancock, Hawkins, Greene, Claiborne, Grainger, Hamblen, Cocke, Scott, Campbell, Union, Anderson, Knox, Jefferson, Sevier, Morgan, Roane, Loudon, Blount, Bledsoe, Rhea, Meigs, McMinn, Monroe, Grundy, Sequatchie, Hamilton, Bradley, Polk, Franklin, and Marion.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.10, continued)

2. Tank fees for underground storage tanks in the following Middle Tennessee counties shall be due October 31 of each year:

Stewart, Montgomery, Robertson, Sumner, Macon, Clay, Pickett, Houston, Hickman, Cheatham, Davidson, Wilson, Trousdale, Smith, Jackson, Overton, Fentress, Putnam, Cumberland, White, DeKalb, Van Buren, Warren, Cannon, Rutherford, Williamson, Dickson, Humphreys, Perry, Wayne, Lewis, Lawrence, Maury, Giles, Marshall, Lincoln, Moore, Bedford, and Coffee.

3. Tank fees for underground storage tanks in the following West Tennessee counties shall be due January 31 of each year:

Lake, Obion, Weakley, Henry, Dyer, Crockett, Gibson, Carroll, Benton, Lauderdale, Tipton, Shelby, Haywood, Fayette, Madison, Hardeman, Henderson, Chester, McNairy, Decatur, and Hardin.

- (b) The owner/operator of petroleum underground storage tanks shall pay the annual fee on or before the due date.
- (c) Any owner who brings an underground storage tank system into use after July 1, 1989, must submit the current year's tank fee with the required notice of existence of such tank system required in rule 1200—1—15—.02(3)(a).

(7) *Issuance of Annual Petroleum Underground Storage Tank Facility Certificates*

- (a) The Division shall issue petroleum underground storage tank facility certificates annually. The certificate will contain the facility identification number, address, number of underground storage tanks, and the size of said tanks. The color of the certificate will be changed annually in order to assist persons delivering petroleum in determining if the underground storage tank facility has a current certificate.
- (b) Certificate issuance shall be staggered using the three grand divisions of the state of Tennessee. Certificates shall be issued as follows:

1. Petroleum underground storage tank facility certificates for East Tennessee shall be issued in the month of September to owner/operators for petroleum underground storage tanks in the following counties:

Johnson, Sullivan, Carter, Washington, Unicoi, Hancock, Hawkins, Greene, Claiborne, Grainger, Hamblen, Cocke, Scott, Campbell, Union, Anderson, Knox, Jefferson, Sevier, Morgan, Roane, Loudon, Blount, Bledsoe, Rhea, Meigs, McMinn, Monroe, Grundy, Sequatchie, Hamilton, Bradley, Polk, Franklin, and Marion.

The annual certificate shall be effective for one year, starting October 1 of the year to September 30 of the following year.

2. Petroleum underground storage tank facility certificates for Middle Tennessee shall be issued in the month of December to owner/operators for petroleum underground storage tanks in the following counties:

Stewart, Montgomery, Robertson, Sumner, Macon, Clay, Pickett, Houston, Hickman, Cheatham, Davidson, Wilson, Trousdale, Smith, Jackson, Overton, Fentress, Putnam, Cumberland, White, DeKalb, Van Buren, Warren, Cannon, Rutherford, Williamson, Dickson, Humphreys, Perry, Wayne, Lewis, Lawrence, Maury, Giles, Marshall, Lincoln, Moore, Bedford, and Coffee.

The annual certificate shall be effective for one year, starting January 1 of the year to December 31 of the same year.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.10, continued)

3. Petroleum underground storage tank facility certificates for West Tennessee shall be issued in the month of March to owner/operators for petroleum underground storage tanks in the following counties:

Lake, Obion, Weakley, Henry, Dyer, Crockett, Gibson, Carroll, Benton, Lauderdale, Tipton, Shelby, Haywood, Fayette, Madison, Hardeman, Henderson, Chester, McNairy, Decatur, and Hardin.

The annual certificate shall be effective for one year, starting April 1 of the year to March 31 of the following year.

(8) *Unlawful Action*

It shall be unlawful to put petroleum into underground storage tanks at a facility without a current petroleum underground storage tank facility certificate. This is a violation for the person putting petroleum into the underground storage tank as well as for the person having product put into the underground storage tank.

(9) *Removal of Certificates*

The Division may remove the petroleum underground storage tank facility certificate from a facility if the owner/operator violates the provisions of *T.C.A. §68—53—101 et seq.* or any regulations promulgated subsequent to this Act. Such removal must be authorized through issuance of a Commissioner's Order due to violations of the Act or regulations. The owner/operator may appeal the Commissioner's Order to the Board.

Authority: T.C.A. §§68—53—101 et seq., 68—53—107, 68—53—113 and 4—5—201 et seq. Administrative History: Original rule filed March 1, 1990; effective April 15, 1990. Amendment filed July 3, 1991; effective August 17, 1991.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

1200—1—15—.11 UNDERGROUND STORAGE TANK PROGRAM.

- (1) **Purpose.** The purpose of this rule is to establish a system and schedule whereby certain fees shall be levied by the Petroleum Underground Storage Tank Board and collected by the Commissioner. Expenditures of such fees collected shall be restricted to operation of the Petroleum Underground Storage Tank Program established pursuant to *T.C.A. §68—53—101 et. seq.*
- (2) **Applicability.** Requirements of this rule apply to the following persons:
- (a) All owners/operators of petroleum underground storage tanks reported under the requirements of *T.C.A. §68—53—101 et. seq.* as follows:
1. All petroleum underground storage tanks that are actively storing petroleum;
 2. All petroleum underground storage tanks that are reported as in service on July 1, 1989; and
 3. All petroleum underground storage tanks taken temporarily out of service after June 30, 1988 and have not been properly closed.
- (b) Rule 1200—1—15—.11 shall be effective December 8, 1989 through June 30, 1990.
- (3) **Annual Petroleum Underground Storage Tank Fees**
- (a) Any person required to pay a fee under this rule shall submit the fee in the specified amount, with checks made payable to the Department of Health and Environment/Underground Storage Tank Division for deposit in the State Treasury.
- (b) Any person who is an owner of a petroleum underground storage tank subject to annual fees shall pay the required annual fee unless a notarized agreement signed by the owner and the operator of petroleum underground storage tanks stipulates that the operator shall pay the annual fee. A new agreement must be submitted annually if the operator is to pay the annual fee.
- (c) The amount of the annual petroleum underground storage tank fee shall be one hundred dollars (\$100) per tank for the July 1, 1989 to June 30, 1990 fiscal year.
- (d) The amount of the annual administrative service fee for agencies and functions of the United States Government having sovereign immunity shall be twenty five dollars (\$25.00) per tank for the July 1, 1989 to June 30, 1990 fiscal year. Agencies and functions of the United States Government are not eligible for benefit or financial assistance from the Tennessee Petroleum Underground Storage Tank Fund.
- (4) **Use of the Fee.** The petroleum underground storage tank fees shall be deposited into the Petroleum Underground Storage Tank Fund and shall be used as specified in the Tennessee Petroleum Underground Storage Tank Act.

The use of the fund includes, but is not limited to the following:

- (a) The fund shall provide for cleanup of contamination caused by leaking petroleum underground storage tanks whose owners and/or operators have paid the required petroleum underground storage tank fee. The fund shall be responsible for cleanup costs above the entry level to the fund in an amount not to exceed one million dollars (\$1,000,000). For the period between July 1, 1989 and April 30, 1990, the initial owner and/or operator financial responsibility requirements for cleanup shall be fifty thousand dollars (\$50,000). The fund shall be responsible for cleanup of contamination due to leaking petroleum underground storage tanks on a per site per occurrence basis.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.11, continued)

- (b) The fund shall provide coverage for third-party claims involving bodily injury and/or property damage caused by leaking petroleum underground storage tanks whose owners and/or operators have paid the required petroleum underground storage tank fee. The fund shall be responsible for court awards involving third party claims above the entry level into the fund in an amount not to exceed one million dollars (\$1,000,000). For the period between July 1, 1989 and April 30, 1990, the initial owner and/or operator financial responsibility requirement for third party claims involving bodily injury or property damage shall be one hundred fifty thousand dollars (\$150,000). The fund shall be responsible for third party claims involving bodily injury and/or property damage caused by leaking petroleum underground storage tanks on a per site per occurrence basis.
- (5) Failure to Pay the Annual Petroleum Underground Storage Tank Fee
- (a) Any petroleum underground storage tank owner or operator who fails to pay the lawfully levied petroleum underground storage tank fee on or before the due date shall be assessed a monthly penalty of 5 percent of the amount due, which shall accrue on the first day of delinquency and be added thereto. Thereafter, on the last day of each month during which any part of any fee or any prior accrued penalty remains unpaid, an additional 5 percent (5%) of the then unpaid balance shall accrue and be added thereto.
- (b) The commissioner may proceed with action described in the Tennessee Petroleum Underground Storage Tank Act for failure to pay the lawfully levied petroleum underground storage tank fee.
- (6) Petroleum Underground Storage Tank Annual Fee Notices
- (a) Prior to the due date of the annual petroleum underground storage tank fee, the Division shall issue fee notices to the owners/operators of petroleum underground storage tanks. Fee notices and due dates shall be staggered using the three grand divisions of the State of Tennessee.
1. Tank fees for underground storage tanks located in the following East Tennessee counties shall be due December 31, 1989:

Johnson, Sullivan, Carter, Washington, Unicoi, Hancock, Hawkins, Greene, Claiborne, Grainger, Hamblen, Cocke, Scott, Campbell, Union, Anderson, Knox, Jefferson, Sevier, Morgan, Roane, Loudon, Blount, Bledsoe, Rhea, Meigs, McMinn, Monroe, Grundy, Sequatchie, Hamilton, Bradley, Polk, Franklin, and Marion.
 2. Tank fees for underground storage tanks located in the following Middle Tennessee counties shall be due December 31, 1989:

Stewart, Montgomery, Robertson, Sumner, Macon, Clay, Pickett, Houston, Hickman, Cheatham, Davidson, Wilson, Trousdale, Smith, Jackson, Overton, Fentress, Putnam, Cumberland, White, DeKalb, Van Buren, Warren, Cannon, Rutherford, Williamson, Dickson, Humphreys, Perry, Wayne, Lewis, Lawrence, Maury, Giles, Marshall, Lincoln, Moore, Bedford, and Coffee.
 3. Tank fees for underground storage tanks located in the following West Tennessee counties shall be due March 31, 1990:

Lake, Obion, Weakley, Henry, Dyer, Crockett, Gibson, Carroll, Benton, Lauderdale, Tipton, Shelby, Haywood, Fayette, Madison, Hardeman, Henderson, Chester, McNairy, Decatur, and Hardin.

UNDERGROUND STORAGE TANK PROGRAM

CHAPTER 1200—1—15

(Rule 1200—1—15—.11, continued)

- (b) Any owner who brings an underground storage tank system into use after July 1, 1989 shall submit the current year's underground storage tank fee with the required notice of existence of such tank system(s) required in *T.C.A. §68—53—105(4)*.
- (7) **Unlawful Action.** It shall be unlawful to put petroleum into underground storage tanks at a facility without a current petroleum underground storage tank facility certificate. This is a violation for the person putting petroleum into the underground storage tank as well as for the person having product put into the underground storage tank.
- (8) **Removal of Certificates.** The Division may remove the petroleum underground storage tank facility certificate from a facility if the owner/operator violates the provisions of *T.C.A. §68—53—101 et. seq.* or any regulations promulgated subsequent to this Act. Such removal must be authorized through issuance of a Commissioner's Order due to violations of the Act or regulations. The owner/operator may appeal the Commissioner's Order to the Board.

Authority: T.C.A. §§68—53—101 et seq., 68—53—107, 68—53—113 and 4—5—201 et. seq. Administrative History: Original rule filed October 24, 1989; effective December 8, 1989. Amendment filed December 19, 1989; effective February 2, 1990. Amendment filed July 3, 1991; effective August 17, 1991.



Tennessee Department of Environment and Conservation,
Authorization No. 327437, 2,500 copies. This public
document was promulgated at a cost of \$1.96 per copy.
March 1993.

APPENDIX D

**OAK RIDGE Y-12 PLANT
UNDERGROUND STORAGE TANK
OPERATIONAL PROCEDURE**



Martin Marietta Energy Systems, Inc.
Oak Ridge, Y-12 Plant Command Media

Number: Y10-35-MM-013

Date: 03/10/94

Supersedes: New

Page: 1 of 24

Facilities Management
Materials Management Department
Administrative

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

Approvals:

Al Miller
Validator

3-24-94
Date

Marcia D. Whitson
Subject Matter Expert

3-21-94
Date

[Signature]
Facilities Management Organization. Chairperson
Procedures Configuration Control Board

3-30-94
Date

G.R. Taylor
Manager. Materials Management Department

3-30-94
Date

Support Approvals:

S. E. Bohemen
Representative, Environmental Management Department
Health, Safety, Environmental and Accountability Organization

3/10/94
Date

J.M. Case
General Supervisor, Transportation Safeguard Division

3-29-94
Date

This procedure has been reviewed by an
Authorized Derivative Classifier and has been
determined to be UNCLASSIFIED. This
review does not constitute clearance for
public release.

4-11-94
Effective Date

R. D. Scarborough 3/24/94
Name & Date

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

CONTENTS

- I. PURPOSE 3
- II. REQUIREMENTS REFERENCES 3
- III. SCOPE/LIMITATIONS 3
- IV. DEFINITIONS 3
- V. GENERAL INFORMATION 6
- VI. REQUIREMENTS 6
 - A. *General* 6
 - B. *Documentation* 6
 - C. *Safety* 8
 - D. *Leak Testing (Weekly and Annual Requirements)* 9
 - E. *Emergency/Alarms and Notifications* 9
- VII. RESPONSIBILITIES 10
 - A. *Materials Management Supervisor* 10
 - B. *Materials Clerk* 12
- VIII. ACTION STEPS 13
- IX. REQUIRED RECORDS 13
- X. ADMINISTRATION 14
- XI. APPENDIXES 14
 - A. *Fuel Station Daily Inventory Record for Facility _____* 15
 - B. *Y-12 Plant Fuel Station: Vehicle Fuel Log (Ethanol 11-030-1125)* 17
 - C. *Y-12 Plant Fuel Station: Heavy-Equipment Fuel Log (Ethanol 11-030-1125)* 18
 - D. *Y-12 Plant Fuel Station: Vehicle Fuel Log (Diesel 11-025-0900)* 19
 - E. *Fuel Station Receipt Form and Steps for Printing Delivery Report* 20
 - F. *In-Tank Leak Detection Status and Operating Steps to Perform In-Tank Leak Test* .. 21
 - G. *Warnings and Alarms Chart* 23

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements
--

I. PURPOSE

To establish the responsibilities, safety guidelines, and operating instructions for the safe and efficient operation of the Y-12 Plant Fuel Stations located at Building 9754-3 and TSD.

II. REQUIREMENTS REFERENCES

A. Flowdown Documents

1. Y-12 Plant Emergency Procedure 40-007: *Reporting of and Responding to On-Site Hazardous Material Releases*
2. Y-12 Plant Health and Safety Procedure 70-208: *Hazard Communication*

B. Other Documents Needed

1. Martin Marietta Energy Systems, Inc., *Stores Operating Manual*
2. State of Tennessee, Tennessee Petroleum Underground Storage Tank Act, T.C.A. 68-215-101, et. seq.

III. SCOPE/LIMITATIONS

Applies to all Materials Management Department personnel responsible for the safe and efficient operation and/or supervision of the Y-12 Plant Fuel Stations located at Building 9754-3 and TSD.

IV. DEFINITIONS

A. *Abbreviations:* Displayed on reader of Veeder-Root (V-R) TLS-350 and TLS-250 Tank-Monitoring Systems:

- C#: "2 Wire C.L." (Type A) followed by its number
- I#: "External Input" followed by its number
- L#: "Liquid Sensor" followed by its number
- P#: "Pipeline" followed by the specific line number
- T#: "Tank" followed by the specific tank number

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

IV. DEFINITIONS (Cont.)

- B. *Alarms*: The V-R TLS-350 Tank-Monitoring Systems displaying and sounding four alarms: (1) audible alarm in the monitor, (2) visual alarm on the monitor, (3) audible alarm mounted above the monitor, and (4) a visual alarm located on a pole northeast of Building 9754-3. The V-R TLS-250 Tank-Monitoring System located at TSD displaying and sounding two alarms: (1) audible alarm in the monitor and (2) visual alarm on the monitor.
- C. *Alphanumeric Buttons*: On the V-R TLS-350 system, the twelve right-hand buttons providing alphanumeric functions and allowing input of leak-test start times and test durations while in the operating mode.
- D. *Calibration*: To ensure that the meter on the fuel dispenser is accurate. This calibration is required annually and can be conducted by the operating facility or service contractor. (Note: Retailers are required to have dispensers calibrated and certified by the Department of Agriculture annually).
- E. *Manual (Dipstick) Tank Gaging*: Manual measuring method used for measuring level of fuel in underground storage tanks. The instrument used for actual measurements of the fuel is called a dipstick.
- F. *Material Safety Data Sheet (MSDS)*: Descriptive data sheet for fuels, located in the Emergency Manual, Hazardous Materials Section maintained at these facilities.
- G. *Monitoring Functions*: (1) In-tank inventory data, (2) last-shift inventory data, (3) in-tank test results, (4) liquid status, (5) two-wire (type A) status, (6) start in-tank leak test, (7) stop in-tank leak test, and (8) test output relays.
- H. *Operating-Button Functions*: On the V-R TLS-350 system, twelve buttons located on the left side providing operational buttons to access and print data and to start and stop leak tests.
- I. *Pressurized Lines*: Used when the sump pump is located at the underground storage tanks to push product to the fuel dispensers.
- J. *Printer*: Printing device attached to front panel of the V-R monitor system which prints reports from the leak-detection monitoring system. The TLS-350 unit uses 2 1/4-inch thermal paper. The TLS-250 unit uses 2 1/2-inch thermal paper.
- K. *Red Jacket PPM 4000 Line Leak Detector (located at TSD)*: Detector located on the sump pumps and able to detect leaking at the rate of 3 gallons per hour in the pressurized fuel lines. When a leak is detected, the device constricts fuel flow.

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements
--

IV. DEFINITIONS (Cont.)

- L. *Red Jacket XLD Line Leak Detector (located at Building 9754-3)*: Detector located on the sump pumps and able to detect leaking at the rate of 3 gallons per hour in the pressurized fuel lines. When a leak is detected, the device constricts fuel flow.
- M. *TLS-250 Monitoring Device Front Panel (located at TSD)*: Monitoring system area housing 6-button keyboards; four-lamp type indicators showing power-on, warning and alarm conditions; and liquid crystal display.
- N. *TLS-350 Monitoring Device Front Panel (located at Building 9754-3)*: Monitoring system area housing 24-button keyboards; three-lamp type indicators showing power-on, warning and alarm conditions; and two-line 24-character-per-line liquid crystal display.
- O. *Tokheim Commercial Refueling Dispenser*: Fuel-dispensing device consisting of supply lines from the underground tanks; shear valves; submerged pump.
- P. *Ullage*: The air space inside the underground storage tanks.
- Q. *Underground Storage Tank (UST) Registration Certificate*: Registration certification issued annually by the State of Tennessee. The original certificate must be conspicuously posted at fueling facilities.
- R. *Veeder-Root TLS-250 UST Monitoring System (located at TSD)*: An advanced, fully integrated tank monitoring system that can provide (1) complete inventory information on fuel stored in USTs, (2) warning of leaks from these tanks, and (3) detection of product discrepancies to an accuracy of 0.2.
- S. *Veeder-Root TLS-350 UST Monitoring System (located at Building 9754-3)*: An advanced, fully integrated tank monitoring system that can provide (1) complete inventory information on fuel stored in USTs, (2) warning of leaks from these tanks, and (3) detection of product discrepancies to an accuracy of 0.1.

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

V. GENERAL INFORMATION

The Building 9754-3 and TSD fueling stations shall be operated and maintained in compliance with the State of Tennessee regulations and Y-12 Plant policies and procedures.

WARNING

SMOKING IS PROHIBITED within 50 ft of fueling station islands and underground storage tanks.

VI. REQUIREMENTS

A. General

1. At the beginning of each shift the status of the Building 9754-3 and TSD fueling stations shall be determined (i.e., nonalarm status and no detected abnormalities at the tank site or islands).
2. An inventory tape is printed from the V-R monitoring system by pressing the PRINT key. The gallon amounts of fuel indicated on this tape are listed on the Daily Inventory Record (Appendix A), and the tape is attached to the station Narrative Logbook for that day. Other data on the tape is reviewed for unusual or abnormal readings.
3. Fuel pumps shall be turned On at the beginning of the shift and turned Off when personnel leave the facility.
4. While fuel is being dispensed to a vehicle, the vehicle's motor shall be turned off.

B. Documentation

1. Documentation of the status of the fueling facility shall be recorded in the station Narrative Logbook, and the inventory tape from the V-R monitoring system shall be attached to the station Narrative Logbook daily.

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements
--

VI. REQUIREMENTS

B. *Documentation* (Cont.)

2. The amount of fuel in the UST when the facility opens, gallons dispensed, gallons off-loaded, and end-of-the-day fuel amount shall be recorded on the Daily Inventory Record (Appendix A).
3. At the Building 9754-3 fueling station **ONLY**, as fuel is dispensed, the transaction should be documented appropriately as follows:
 - a. For vehicles, complete Vehicle Fuel Log, a white form (Appendix B).
 - b. For heavy equipment, complete Heavy Equipment Fuel Log, a yellow form, (Appendix C).
 - c. For diesel vehicles, complete Vehicle Fuel Log, a blue form (Appendix D).
 - d. Tenths of miles shall not be recorded from the odometer reading.

NOTE: Each completed form must be submitted DAILY to Material Control.

4. Documentation shall be made of the amount of off-loaded fuel and the readings from V-R monitoring system tape shall be printed after off-loading.
5. The readings taken before and after off-loading are recorded on the Fuel Station Receipt Form (Appendix E) and the Daily Inventory Record (Appendix A).
6. The Fuel Station Receipt Form and any freight bills are submitted to Material Control.

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

VI. REQUIREMENTS (Cont.)

C. Safety

1. Before performing maintenance, service, or changing fuel filters/strainers, all power must be shut off at the master electrical panel and impact valve must be closed.

WARNING

While service is performed, traffic shall be flagged away from the fuel station island.

2. When receiving gasoline/diesel fuel from tanker, all traffic shall be flagged away from the fuel station island and pumps must be turned off.
3. Should assistance be required to perform the off-loading operation, the following safety equipment is required:
 - a. Neoprene, nitrile or polyvinyl alcohol gloves
 - b. Safety glasses with side shields
 - c. Safety shoes
4. Off-loading operations performed by the vendor shall be monitored:
 - a. If unsafe conditions are observed, off-loading shall be STOPPED immediately.
 - b. If the V-R monitoring system fails to track the off-loading of fuel, the dipstick shall be used for measuring.
 - c. Always ensure that residue from the dipstick drains back into the tank and not onto the ground.
 - d. After off-loading is complete, a second measurement is taken. Any discrepancies between readings and the freight bill must be resolved.
5. The off-loaded fuel amount shall be recorded on the Fuel Station Receipt Form (Appendix E) and the Daily Inventory Record (Appendix A).

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

VI. REQUIREMENTS (Cont.)

D. *Leak Testing (Weekly and Annual Requirements)*

1. An in-tank leak detection test by the V-R monitoring systems shall be conducted WEEKLY, when the fuel stations are closed. If the test fails, a manual test shall be conducted, following the steps outlined in Appendix F. The leak-test results shall be printed on a tape from the V-R monitoring system and attached to the Narrative Logbook.

WARNING

The in-tank leak-detection test shall NOT be conducted while fuel station is in operation or while fuel is being dispensed.

NOTE: The in-tank leak-detection test shall NOT be conducted while fuel station is in operation or while fuel is being dispensed.

2. The Red Jacket line leak detectors shall be checked ANNUALLY to see if the detection device will trip. The results of this annual check shall be recorded in the station Narrative Logbook as a permanent record.
3. Calibration of the fuel-dispenser meters shall be conducted ANNUALLY. Documentation of the step-by-step calibration adjustments during this annual check shall be recorded in the station Narrative Logbook as a permanent record.
4. A validation test of the accuracy of the V-R systems shall be conducted ANNUALLY. The results of the test shall be recorded in the station Narrative Logbook as a permanent record.

E. *Emergency/Alarms and Notifications*

1. Spills shall be reported to the Plant Shift Superintendent immediately (Building 9754-3 personnel shall call 4-7172 and TSD personnel shall call 4-3282) or 911 or by pulling the Gamewell box.

NOTE: If containment can be SAFELY performed by operating personnel, the spill shall be kept from drains, soil, and water sources until emergency-response personnel arrive.

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

VI. REQUIREMENTS

E. *Emergency/Alarms and Notifications (Cont.)*

2. The Emergency Stop Button on the west wall inside the 9754-3 fuel station building will disable the dispensers immediately. To reactivate the dispensers the electrical power must be restored at the electrical box and the emergency stop button pulled out.
3. If the audible and visual alarms are activated by the V-R monitoring device, follow the steps outlined in Appendix G, which includes display messages, type of alarm, cause, response steps, and notification.
4. Alarm devices shall be maintained in good operating order at all times. If failure of any type is identified, the supervisor shall be notified immediately.
5. The V-R monitoring system will automatically send a detailed report should an alarm status be detected. This report shall be maintained in the station Narrative Logbook as a permanent record of the event.
6. If any of the following conditions are detected, the Environmental Management Department is notified who reports to the Tennessee Department of Health and Environment:
 - a. Released fuel is discovered (e.g., in an unusual area or as a visible sheen).
 - b. Leak detection equipment indicates a release.
 - c. A spill of more than 25 gallons of product must be reported within 72 hours or, if less than 25 gallons of product is spilled and cannot be cleaned up within 72 hours.
 - d. Unusual operating conditions are detected.
 - e. Monitoring system (V-R) has a failed test result of >0.2 .
 - f. Monthly reconciliation of inventory indicates loss of $>1\%$ flowthrough plus 130 gallons.

VII. RESPONSIBILITIES

A. *Materials Management Supervisor*

1. Ensures that employees are trained to use and operate the fuel dispensing equipment, leak-detection monitoring equipment, and air-compression equipment.

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements
--

VII. RESPONSIBILITIES

Materials Management Supervisor (Cont.)

2. Ensures that employees assigned to operate the Fuel Stations are on-the-job trained.
3. Contacts contract service personnel to make necessary repairs and perform preventive maintenance as needed.
4. Notifies Material Control personnel when fuel should be ordered.
5. Supervises the off-loading of fuel, verifies inventory tape from V-R system against freight bill quantity and signs necessary receipt documents.
6. Ensures that Materials Clerks are maintaining required records and oversees the reconciliation of the Daily Inventory Record MONTHLY.
7. Ensure that spill-response supplies are maintained nearby on the premises.
8. Notifies and/or assists emergency response teams as needed for spills or emergency situations.
9. Reports any occurrences to line and environmental management. Completes occurrence reports as needed.
10. In the event a fuel leak is detected, assisted by Y-12 Plant Environmental Management:
 - a. Prevents further release if possible.
 - b. Identifies and mitigate fire, explosion and vapor hazards.
 - c. Removes as much product from UST as necessary to prevent further leaking.
 - d. Identifies any aboveground and exposed below ground released fuel to prevent further release
 - e. Remedies hazards posed by contaminated soil.
 - f. Removes any free product detected.

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

VII. RESPONSIBILITIES

A. *Materials Management Supervisor* (Cont.)

11. Should a release occur, assists environmental management in issuing (1) the Initial Abatement Report 20 days after confirmed release and (2) the Free Product Removal Report 45 days after confirmed release.
12. Guides the Materials Clerk on correct response to alarms detected by the V-R monitoring equipment.

B. *Materials Clerk*

1. Conducts a walk-through of the fuel station at the beginning of each shift, to determine the status of the facility and:
 - a. documents the status in the station Narrative Logbook.
 - b. prints the inventory listing from the V-R monitoring printer.
 - c. records the gallons on the Daily Inventory Record.
 - d. tapes the inventory report into the station Narrative Logbook.
2. Re-energizes the fuel pumps at the beginning of each shift.
3. Dispenses fuel when the status of all equipment is normal and vehicle engines are turned OFF.
4. Documents fuel dispensing on appropriate form Appendix A and for the 9754-3 fuel station, Appendixes B, C, and D.

NOTE: The Appendix A daily inventory record is turned in MONTHLY to the supervisor; and Appendixes B, C, and D are turned in DAILY to Material Control or the supervisor.

5. When fuel is being received, flags all vehicle traffic away from fuel station island.
6. After off-loading of fuel, prints inventory tape from V-R monitoring system, and records on Fuel Station Receipt Form (Appendix E), and on the Daily Inventory Record (Appendix A). If the V-R monitoring system is unable to print inventory tape, takes measurement with the Dipstick.
7. Responds to spills and/or other emergencies by calling the Plant Shift Superintendent, 911, or by pulling the Gamewell box alarm.

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements
--

VII. RESPONSIBILITIES

B. *Materials Clerk* (Cont.)

8. Notifies supervisor of spills and/or other emergencies.
9. Responds to audible and visual alarms signalled by the V-R monitoring system as described in Appendix G.
10. Maintains supplies as needed for the daily operations of the fuel facility.
11. Notifies supervisor immediately of all maintenance needs and/or equipment failures and documents the condition in the Facility Narrative Logbook.

VIII. ACTION STEPS

None.

IX. REQUIRED RECORDS

1. Installation and warranty records of the equipment must be kept for the life of the facility.
2. Record of the results of the initial tank leak test conducted with 95% product shall be maintained as a permanent record.
3. Record of the location, age of the UST, and the type of equipment shall be maintained as a permanent record.
4. Record of the results of the annual test conducted on the Red Jacket line equipment, the V-R monitoring systems and the calibration test shall be maintained for 10 years.
5. Daily inventory tapes printed from the V-R monitor are maintained in the station Narrative Logbook as a permanent record.
6. All tank leak-test results shall be maintained for 12 months.
7. Daily Inventory Records shall be maintained for 12 months.
8. Any alarm status reports generated by the V-R monitor shall be maintained and attached to the station Narrative Logbook as a permanent record.

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

X. ADMINISTRATION

- A. The interpretation and the administration of this procedure is the responsibility of the Manager, Materials Management Department.
- B. A hard copy of this procedure shall remain in the Y-12 Plant Procedures Representative's office and another copy in the FMO Procedures Representative's work area. The master copy of this procedure is printed in PC WordPerfect 5.1, and the electronic (disk) storage is kept by the FMO Procedures Coordinator.

XI. APPENDIXES

- A. *Fuel Station Daily Inventory Record for Facility _____*
- B. *Y-12 Plant Fuel Station: Vehicle Fuel Log (Ethanol 11-030-1125)*
- C. *Y-12 Plant Fuel Station: Heavy-Equipment Fuel Log (Ethanol 11-030-1125)*
- D. *Y-12 Plant Fuel Station: Vehicle Fuel Log (Diesel 11-025-0900)*
- E. *Fuel Station Receipt Form and Steps for Printing Delivery Report*
- F. *In-Tank Leak Detection Status and Operating Steps to Perform In-Tank Leak Test*
- G. *Warnings and Alarms Chart*

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

Appendix A

FUEL STATION DAILY INVENTORY RECORD FOR FACILITY _____						
Tank No. _____		Type of fuel in Tank: _____			Month/Year: _____	
DAY	A OPENING GAL READING	B GALLONS DISPENSED	C GALLONS ADDED	D INVENTORY BALANCE (D = A - B + C)	E CLOSING GAL READING	F DAILY INVENTORY (F = D - E)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

See Monthly Reconciliation on Back

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

Appendix A (Cont.)

MONTHLY RECONCILIATION

Total From Column (B)						Gallons For Suspected Release		Total From Column (F)		Monthly Inventory
	X	0.01	+	130	=		-		=	

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

Appendix E

FUEL STATION RECEIPT FORM

Steps for Printing Delivery Report

1. Press, *Function Key*
2. Press, *Step Key* until reader displays - DELIVERY
3. Press, *Print Key*

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

Appendix F

IN-TANK LEAK DETECTION	
Minimum test time is 5 hours	
Pretest Conditions: Following the inventory report, the system will print out, tank by tank, the number and any in-tank pre-test conditions affecting the test results.	
POSSIBLE CONDITION	ACTIONS REQUIRED
Probe segments out of range	Call for service.
Delivery mix error	Use product until condition is corrected.
Temperature out of range	Wait for a change in temperature; retest.
Recent delivery	Wait for product to settle and retest.
Tank level low	Reorder fuel.
Posttest Condition: During the leak-detect test, the system will again look for tank and equipment conditions that could invalidate or cause a false FAILURE reading such as:	
POSSIBLE CONDITION	ACTION REQUIRED
Test mix error	Use product until condition corrects.
Segment out of range	Call for service.
Delivery mix error	Use product until condition corrects.
First-hour error	Retest.
Last-hour error	Retest.
Temperature change error	Wait for change in temperature; retest.
Temperature out of range	Wait for change in temperature; retest.
Recent delivery	Wait for product to settle and retest.
Tank level low	Reorder product.
End of Test Report: Will indicate one of the following four conditions for each tank:	
PASSED	Volume change (if any) was less than 0.1 gallon per hour.
FAILED	Volume change was greater than +/- 0.1 gallon per hours, and all test conditions were acceptable.
INVALID	One or more test conditions were outside acceptable parameters and the volume change was greater +/- 0.1 gallon per hour. The tank number, product label, and unacceptable condition(s) will be printed after the leak-rate report.
SHORT	Test duration was too short to yield valid test results.

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements
--

Appendix F (cont.)

STEPS TO PERFORM IN-TANK LEAK TEST

TO CONDUCT TEST FOR ALL TANKS

On Operational Button Functions (left-hand keypad)	Press <STEP>
Continuing test for All Tanks	Press <STEP>
All tanks timed duration	Press <STEP>
All tanks test to 0.1 gal/hr	Press <STEP>
All tanks duration:	Press <CHANGE>
Now enter duration: <5> <i>(Test for this system takes a minimum of 5 hours, maximum numbers of hours available to run test should be used)</i>	Press <ENTER>
To continue	Press <STEP>
Start Leak Test	Press <ENTER>

TO CONDUCT TEST FOR SINGLE TANKS

On Operational Button Functions (left hand keypad)	Press <STEP>
Continue test for single tanks	Press <CHANGE> Press <ENTER> Press <STEP>
To enter tank number	Press <TANK>
Enter tank #: < >	Press <STEP>
All-tanks test to 0.1 gal/hr	Press <STEP>
All-tanks duration:	Press <CHANGE>
Now enter duration: <5>	Press <ENTER>
To continue	Press <STEP>
Start Leak Test	Press <ENTER>

Y10-35-MM-013 Date: 03/10/94 Supersedes: New Page: 23 of 24

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

Appendix G

WARNINGS AND ALARMS

SYSTEM-STATUS MESSAGES				
DISPLAY MESSAGE	TYPE OF ALARM	CAUSE	RESPONSE STEPS	NOTIFICATION
Setup data warning	Audible beep Yellow flashing light	System-setup problem has been detected.	Set-up parameters should be input by qualified persons only.	Supervisor Service Company
Paper out	Audible beep Yellow flashing light	Paper roll is empty	Replace paper roll in printer,	None
Printer error	Audible beep Yellow flashing light	Print free - roller release is open, OR Printer temperature thermistor has failed.	Push the release lever up to closed position, OR No action; notify Supervisor	None Supervisor
IN-TANK PROBES, INTERSTITIAL PROBES, SUMP SENSORS, AND DISPENSER SENSORS WARNING AND ALARM MESSAGES				
Leak alarm or sudden-loss alarm	Audible beep Red flashing light	Fuel loss has exceeded the Leak Alarm Limit during a leak test; limit is programmable.	Disengage audible alarms.* Print alarm message. Notify supervisor immediately. If unable to notify supervisor immediately, call 911, pull the gamewell box or call 4-7172 at Y-12 or 4-3282 at TSD.	Supervisor PSS Environmental Officer
High-water alarm and/or warning	Audible beep Red flashing light and/or Yellow flashing light	Water collecting in bottom of tank exceeds limit; limit is programmable. If water level exceeds 1", Environmental Management should be notified.	Disengage audible alarms.* Print alarm message. Then notify supervisor.	Supervisor Environmental Officer

*For 9754-3 fuel station the audible alarms are disengaged by switching #5 in the main electrical box. At the TSD facilities the audible alarms is disengaged by using key to set to Alarm Reset on the V-R front panel.

Subject: Fuel Stations, 9754-3 and Transportation Safeguard Division (TSD): Requirements

Appendix G (Cont.)

DISPLAY MESSAGE	TYPE OF ALARM	CAUSE	RESPONSE STEPS	NOTIFICATION
Overfill alarm or high-product alarm	Audible beep Red flashing light	Fuel level in the tank exceeds Overfill Limit during delivery. Limit is programmable	Disengage audible alarms.* Print alarm message. Alert driver to stop off-loading operations and notify supervisor immediately. If a spill has occurred, follow spill response actions.	Supervisor Other notifications as needed
Low-product alarm and/or delivery needed	Audible beep Red flashing light and/or Yellow flashing light	Fuel level has dropped below programmed Low Level Limit	Disengage audible alarms.* Print alarm message. Notify Supervisor to reorder fuel.	Supervisor
Invalid fuel level (in systems equipped with Magnetostrictive probes)	Audible beep Yellow flashing light	The fuel and water measurement floats on probe are too close because of low fuel; while this condition exists, fuel height, volume readings, and delivery reports are invalid.	Disengage audible alarms.* Print alarm message. Notify Supervisor to reorder fuel.	Supervisor
Probe out	Audible beep	A probe is not currently communicating with the console.	Disengage audible alarms.* Print alarm message. Notify Supervisor to call for service.	Supervisor Service Company
Periodic test alarm and/or warning	Audible beep Red flashing light and/or Yellow flashing light	If system is unable to perform a Periodic test (0.1 gph for 9754-3 facility or 0.2 gph for TSD facility) in a programmed number of days, this warning will show.	Disengage audible alarms.* Print alarm message. Notify supervisor and programming should be rechecked.	Supervisor Service Company
Test tank active	Yellow flashing light	This message will be displayed when a requested tank test is in progress.	No action needed.	None

*For 9754-3 fuel station the audible alarms are disengaged by switching #5 in the main electrical box. At the TSD facilities the audible alarms is disengaged by using key to set to Alarm Reset on the V-R front panel.

APPENDIX E

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
UNDERGROUND STORAGE TANK SYSTEM
REPORT FORMS**

11. If applicable, provide the following: date free product was discovered, amount removed, and the way it was managed (storage, treatment, and/or disposal). (Note: Free product removal shall be conducted in accordance with Rule 1200-1-15-.06(5); the Free Product Removal Report shall be submitted within forty-five (45) calendar days of its discovery.)

12. Provide all additional information and data generated during initial abatement.

13. Note: If this is a fund eligible site and reimbursement will be requested from the Tennessee Petroleum Underground Storage Tank Fund an approved Corrective Action Contractor shall perform all work associated with the investigation and remediation of the release from the tank system.

Provide the name(s) of the geologist or professional geologist as defined under Tennessee Code Annotated 62-36-101, the duly licensed professional engineer in the state of Tennessee, and/or an Approved Corrective Action Contractor who conducted the site check, will prepare the Initial Site Characterization Report, and, if necessary, will conduct the soil and ground water investigation and prepare the Corrective Action Plan.

The certification below shall be signed by the tank owner and/or operator (or authorized representative) and the person(s) responsible for preparing the report.

We, the undersigned, certify under penalty of law, including but not limited to penalties for perjury, that the information contained in this report form and on any attachments, is true, accurate and complete to the best of our knowledge, information, and belief. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Owner/Operator (Print)

Signature

Date

Prepared by (Print)

Signature

Date

Note: Each of the above signatures shall be notarized.

STATE OF _____

Sworn to and submitted before me by _____ on this date

_____.

My commission expires _____.

Notary Public - Print Name

Signature

11. Were all applicable sections of the Environmental Assessment Guidelines followed?

Yes _____ No _____

If no, address all variations from the Guidelines.

12. Provide information concerning the amount of contaminated soil removed and the management (storage, treatment, and/or disposal) of contaminated soil. (NOTE: The owner and/or operator shall comply with all applicable state and local requirements.)

13. Provide information concerning the amount of ground water removed and the management (storage, treatment, and/or disposal) of contaminated ground water. (NOTE: The owner and/or operator shall comply with all applicable state and local requirements.)

14. If applicable, provide information concerning the date free product was discovered, amount removed, and the way it was managed (storage, treatment, and disposal). (NOTE: Free product removal shall be conducted in accordance with Rule 1200-1-15-.06(5); the Free Product Recovery Report shall be submitted within forty-five(45) calendar days of its discovery.)

15. Appendix A shall include a table of all analytical results, the laboratory analysis sheets, all soil boring logs and monitoring well diagrams.

16. Appendix B shall include the following:

- a) A scaled site map (no larger than 11 X 17 inches) identifying the location of existing and/or former UST system(s) (indicate former system(s) with dashed lines), the point(s) of release, sampling points, soil borings, monitoring wells, and existing utilities (sewer, water, telephone, etc.).
- b) A topographic map identifying the location of the site and all surface water and water wells potentially impacted by the release.

17. Appendix C shall include the results of all tank and piping tightness tests. (NOTE: Rule 1200-1-15-.03(4)(d) requires that repaired tanks and piping be tested in accordance with Rule 1200-1-15-.04(3)(c) and (4)(b) within thirty (30) calendar days following the date of repair, except as provided in parts 1 through 3 of Rule 1200-1-15-.03(4)(d).)

18. Was the presence of contamination in soil or ground water indicated above the most stringent cleanup levels? (NOTE: If TGD-011 was followed to obtain a less stringent soil cleanup level during a site closure then that level shall apply.

Yes _____ No _____

If yes, the owner and/or operator shall submit the Environmental Assessment Report (EAR) as established in Rule 1200-1-15-.06(6) and other applicable regulations.

If no, the Division will review the actions taken to determine if all work was conducted in accordance with the Guidelines.

19. As required in the Release Response Letter, at a minimum, the initial four (4) soil borings and the initial four (4) monitoring wells were to be installed by the due date of this report. Has this work been performed or an extension granted by the Division?

Yes _____ No _____

20. The attached Cost Estimate Cover Sheet, the Assessment Activities Cost Estimate Form, and the Report Preparation Cost Estimate Form shall be included in Appendix D of this report. The cost incurred to date for all previous activities and an estimate of the cost to complete the environmental assessment and the Environmental Assessment Report shall be summarized on the Cost Estimate Cover Sheet.

The certification below shall be signed by the UST system owner and/or operator (or authorized representative) and a geologist or professional geologist, as defined under Tennessee Code Annotated 62-36-101, or a duly licensed professional engineer in the State of Tennessee.

We, the undersigned, certify under penalty of law, including but not limited to penalties for perjury, that the information contained in this report form and on any attachments, is true, accurate and complete to the best of our knowledge, information, and belief. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Owner/Operator (Print) Signature Date

Prepared by (Print) Signature Date

TN Lic./Reg #

If a P.E. signs this report indicate the area of expertise.

Stamp/Seal

Note: Each of the above signatures shall be notarized.

STATE OF _____

Sworn to and submitted before me by _____ on this date

_____.

My commission expires _____.

Notary Public - Print Name

Signature

TENNESSEE UST COST ESTIMATE COVER SHEET



FACILITY INFORMATION

Facility Name _____ Facility ID# _____
 Address _____
 street city zip phone

CORRECTIVE ACTION CONTRACTOR

Name _____
 Address _____
 street city state zip
 Contact Person _____ phone

COSTS

Submit with ISCR	Estimated Costs	Actual Costs
Site Check		
Initial Abatement / Emergency Response		
Free Product Recovery		
Initial Site Characterization		
Environmental Assessment		
Environmental Assessment Report		

Signature of Person Completing Estimate _____ Date _____

Signature of Owner/Operator _____ Date _____

Submit with EAR	Estimated Costs	Actual Costs
Environmental Assessment		
Environmental Assessment Report		
Corrective Action Plan		

Signature of Person Completing Estimate _____ Date _____

Signature of Owner/Operator _____ Date _____

Submit with CAP	Estimated Costs	Actual Costs
Corrective Action Plan		
Corrective Action		
Monitoring		
Operation & Maintenance		
Closure		

Signature of Person Completing Estimate _____ Date _____

Signature of Owner/Operator _____ Date _____



**DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS
FREE PRODUCT REMOVAL REPORT**

The following information must be provided within forty-five (45) calendar days of the discovery of free product in accordance with Rule 1200-1-15-.06(5)(d). Each item must be addressed in a typewritten report.

When the presence of free product is observed in ground or surface water, an active system capable of continuous free product removal must be installed within forty-eight (48) hours. The minimum objective for the design of the removal system is to stop the migration of free product. When surface water is impacted, petroleum absorbent materials such as booms and pads must be installed and replaced whenever necessary. Flammable products must be handled in a safe and competent manner to prevent fires or explosions.

1. Facility ID #: ___-___-___-___-___
2. Facility Name:
3. Date Free Product Discovered:
4. Date Free Product Removal System Operational:
5. Name, affiliation, and telephone number of the person(s) responsible for implementing the free product removal measures:
6. Describe the estimated quantity, type, and thickness of free product measured in wells, boreholes, and excavations.
7. Describe the type of free product recovery system installed.
8.
 - a. Indicate the location of any discharge taking place on-site or off-site during the recovery operation. (If none, proceed to 9.)
 - b. Describe the type of treatment applied to, and the effluent quality expected from, any discharge.
 - c. Describe the steps that have been or are being taken to obtain necessary permits for any discharge.
9. Describe the method for disposal of the recovered free product.

The certification below shall be signed by the UST system owner and/or operator (or authorized representative) and a geologist or professional geologist, as defined under Tennessee Code Annotated 62-36-101, or a properly licensed professional engineer in the State of Tennessee.

We, the undersigned, certify under penalty of law, including but not limited to penalties for perjury, that the information contained in this report form and on any attachments, is true, accurate and complete to the best of our knowledge, information, and belief. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Owner/Operator (Print)

Signature

Date

Prepared by (Print)

Signature

Date

TN Lic./Reg #

If a P.E. signs this report indicate the area of expertise.

Stamp/Seal

Note: Each of the above signatures shall be notarized.

STATE OF _____

Sworn to and submitted before me by _____ on this date

_____.

My commission expires _____.

Notary Public - Print Name

Signature

APPENDIX F

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
ENVIRONMENTAL ASSESSMENT & CORRECTIVE ACTION PLAN
GUIDELINES**

**TENNESSEE DEPARTMENT OF
ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND
STORAGE TANKS**



**ENVIRONMENTAL
ASSESSMENT
GUIDELINES**

JANUARY 1994

TABLE OF CONTENTS

DISCLAIMER

I.	SOIL INVESTIGATION PROCEDURES	1
	A. Number and Location of Soil Borings	1
	B. Boring Methods	2
	C. Procedures for Sample Collection	3
	1. Equipment and Collection	3
	2. Procedure for Selection of Soil Samples for Laboratory Analyses	4
	D. Analytical Methods	5
	E. Procedure For Determining Soil Permeability	8
	F. Borehole Abandonment	9
	G. Decontamination Procedures	9
	H. Quality Assurance and Quality Control (QA/QC)	10
	I. Data Collection	11
II.	GROUND WATER INVESTIGATION PROCEDURES	12
	A. Number, Type and Location of Monitoring Wells	12
	B. Drilling Methods	13
	C. Special Procedures for Documenting Results of Bedrock Sections	14
	1. Camera Logging Procedures	14
	2. Rock Coring	14
	D. Single Cased Well Installation Procedures	14
	1. Casing and Screen Type	14
	2. Screen Length and Placement	15
	3. Minimum Borehole Diameter	15
	4. Placement and Type of Filter Pack	15
	5. Placement and Type of Filter Pack Seal	16
	6. Placement and Type of Annular Grout	16
	7. Surface Completion	16
	E. Double Cased Monitoring Well Installation Procedures	17
	1. Casing and Screen Type	17
	2. Outer Casing Placement	17
	3. Screen Length and Placement	17
	4. Minimum Borehole Diameter	18
	5. Placement and Type of the Filter Pack	18
	6. Placement and Type of the Filter Pack Seal	18
	7. Placement and Type of the Inner Annular Grout	19
	8. Surface Completion	19
	F. Open-Hole Well Installation Procedures	19
	G. Well Development	20
	H. Water Level Measurements	21
	I. Ground Water Sampling	21
	1. Purging	21
	2. Sample Containers and Preservation	21
	3. Collection Method	22
	4. Chain of Custody	23
	J. Disposal of Purge and Development Water	23

K.	Analytical Methods	23
L.	Ground Water Classification Procedure	25
	1. Water Use Survey	25
	2. Analytical Sampling	26
	3. Pump Test	27
M.	Decontamination Procedures	27
N.	Monitoring Well Abandonment Procedures	28
O.	Quality Assurance and Quality Control (QA/QC)	28
P.	Data Collection	29
III.	SITE SAFETY PLAN	31
A.	Description of Known Hazards and Risks	31
B.	Designation of Key Personnel and Alternatives	31
C.	Designation of the Levels of Protection	31
D.	Delineation of the Work Area	31
E.	Description of Control Procedures	32
F.	Requirements for an Environmental Surveillance Program	32
G.	Requirements for Routine of Special Training	32
H.	Procedures for Weather-Related Problems	32
I.	Determination of Site Specific Medical Requirements	32
J.	On-site Emergencies	32
	1. Establish site emergency procedures	33
	2. Address emergency medical care	34

DISCLAIMER

This document has been prepared to provide guidance and standardized procedures for conducting Environmental Assessments as required under Rule 1200-1-15-.06(6). These guidelines shall be followed unless prohibited by site specific conditions or other applicable statutes, rules or regulations. If a variance is necessary, the Division shall be contacted for approval. All assessment activities shall be reasonable, proper and justifiable in order to receive reimbursement from the Petroleum Underground Storage Tank Fund.

It is understood that the procedures outlined in this document cannot cover every eventuality; however, these guidelines shall be used in all cases where appropriate. If site specific conditions warrant variations from these procedures, the local field office shall be informed prior to the implementation of these variations and approval shall be obtained. All variations from these procedures shall be noted in the Environmental Assessment Report.

I. SOIL INVESTIGATION PROCEDURES

Prior to installing any soil borings, all above and underground utilities, storage tanks and lines shall be identified and clearly marked to prevent accidental damage.

A. Number and Location of Soil Borings

Only the number of soil samples necessary to define the full extent of soil contamination to the applicable cleanup levels shall be collected and analyzed.

During the investigation, soil samples shall be collected and analyzed from borings placed in the following locations:

1. The first boring (B-1/MW-1) shall be placed in the upgradient direction of the release.
2. The second and third borings (B-2/MW-2, B-3/MW-3) shall be placed in the downgradient direction of the release.
3. The fourth boring (B-4/MW-4) shall be placed as close as possible to the location of the release. If the specific location of the release is unknown, then this boring shall be located where the site specific data suggests the highest levels of contamination exist.

After the installation and sampling of the first four (4) soil borings and monitoring wells the site shall be ranked in accordance with Technical Guidance Document - 014. If the owner/operator decides to proceed with the investigation or is required to based on the site ranking, additional soil borings may be required. These additional soil borings will be required if the soil contamination has not been defined to the applicable cleanup levels. If additional soil borings are installed they shall not be placed within fifty (50) feet of any other soil boring unless prior approval has been granted by the Division.

Prior to installing additional soil borings, the following innovative soil investigative technologies may be used if site conditions are suitable:

1. A soil vapor survey, either active or passive, to estimate the size and location of the soil contaminant plume and optimize the placement of additional soil borings; or,

2. A direct push or hydraulic push instrument to retrieve soil samples in lieu of additional soil borings.

The purpose of performing one of these innovative soil investigative technologies is to limit the cost of the additional investigation.

The Environmental Assessment Report (EAR) shall contain written documentation of the order in which these additional boring were installed, the date of installation, and the rationale for the placement of each boring. The rationale shall include, but not be limited to the distance, depth, and direction of the boring from all previous borings, taking into consideration:

1. The estimated and/or known contaminant levels in all previously installed borings;
2. The estimated rate of contaminant migration based on site specific data gathered from all previously installed borings;
3. The estimated or known ground water flow direction and other factors that could influence the direction of the soil contaminant plume migration;
4. The estimated and/or known rate of the decline of contaminant levels between all previously installed borings; and,
5. The results of a soil vapor survey, if performed.

The objective in selecting the additional boring locations is to define the outer limits of the soil contaminant plume without installing a number of intermediate borings. Without proper rationale for the placement of additional borings, the cost for the work may not be reimbursed from the Petroleum Underground Storage Tank Fund.

If the soil plume is adequately identified during the soil sampling procedures, no additional soil sampling shall be required during the installation of subsequent monitoring wells.

Additional soil samples shall be collected and analyzed from all locations (trenches, ditches, additional borings, etc.) where observations or site conditions indicate that contamination is likely to exist and data is necessary to define the extent of contamination.

B. Boring Methods

All soil borings shall be advanced utilizing a hollow-stem auger or a direct push instrument. A hand auger or power auger may be utilized if one of the following conditions exist:

1. The area to be investigated is inaccessible to drill rigs;
2. The sampling point is at a shallow depth and therefore appropriate for the technique; or,
3. The sampling point is near utilities, product lines, tanks or buried structures and extreme care must be taken to prevent damage.

C. Procedures for Sample Collection

1. Equipment and Collection

- a. Surface samples shall be collected using a new, disposable scoop or properly decontaminated stainless steel scoop.
- b. Samples from hand augers and power augers shall be allowed only if discrete samples can be obtained utilizing a properly decontaminated auger bucket, split spoon, or shelby tube. The sampling of auger cuttings is not acceptable.
- c. Samples from borings advanced by a drill rig shall be collected utilizing properly decontaminated split spoon samplers. Soil samples shall be collected continuously for the first twenty (20) feet of a boring and at intervals not to exceed five (5) feet for the remainder of the boring. A two (2) foot or longer split spoon sampler shall be used.
- d. When site conditions are suitable, the use of a direct push or hydraulic push sampling method (i.e. Geoprobe, Cone

penetrometer, etc.) may be utilized. When using the direct push sampling method, all applicable sections of this guidance document shall be followed. Soil samples shall be collected continuously for the first twenty (20) feet of the direct push procedure and at intervals not to exceed five (5) feet for the remainder of the push.

2. Procedure for Selection of Soil Samples for Laboratory Analyses

Upon opening the split spoon, the sample shall be split in half lengthwise. One side of the sample shall be immediately placed into a laboratory prepared jar in a manner that eliminates headspace. The jar shall then be properly labeled and stored at 4°C or less. All samples shall be maintained at 4°C until they are delivered to a Division approved laboratory. Once the potential laboratory sample has been properly stored, the remainder of the soil in the split spoon shall be classified and placed in an air tight container (sealing plastic bag) leaving some air space. The bag shall be properly labeled and the sample allowed to volatilize for a minimum of fifteen (15) minutes at a minimum of 68°F. All samples shall be allowed to volatilize for an equal period of time prior to screening. Once the sample has been allowed to volatilize, the headspace shall be sampled with an Organic Vapor Detector (OVD).

The OVD shall be either a photoionization detector or a flame ionization detector. The use of vapor detection tubes or other methods of screening are not acceptable unless approved in advance by the Division. The following criteria shall be used when selecting soil samples for laboratory analyses:

- a. If the OVD readings and other field screening techniques (visual or olfactory) indicate that contamination does not exist in the soil at a boring location, then the deepest sample shall be analyzed by the laboratory. The deepest sample shall be defined as that sample collected immediately above the soil/bedrock interface, the water table, or the bottom of the boring, whichever occurs first.

- b. If the OVD readings indicate that contamination does not exist in the soil at a boring location but visible or olfactory observations indicate that the soil is contaminated (e.g. heavy hydrocarbon staining), then a minimum of two (2) samples shall be selected for laboratory analyses. The following two (2) samples shall be selected for laboratory analyses:
- i. The sample in which visible or olfactory observations indicated the highest level of contamination; and
 - ii. The sample collected immediately above the soil/bedrock interface, the water table or the bottom of the boring, whichever occurs first.

If one (1) soil sample meets both of the above listed criteria, then only that sample shall be submitted for laboratory analyses.

- c. If the OVD readings indicate that contamination does exist in the soil at a boring location, then three (3) soil samples selected from the following locations shall be submitted for laboratory analyses:
- i. The sample in which the OVD screening indicated the highest level of contamination;
 - ii. The deepest sample which the OVD screening indicated is contaminated; and
 - iii. The sample collected immediately above the soil/bedrock interface, the water table or the bottom of the boring.

If one (1) soil sample meets more than one of the above listed criteria then the sample with the second highest OVD screening shall also be submitted for laboratory analyses.

D. Analytical Methods

For investigations involving petroleum UST's, the two (2) primary types of analyses performed are Benzene, Toluene, and Xylene (BTX) and Total Petroleum Hydrocarbons (TPH). To prevent variances of methods used for

analyses of this type, specific methods shall be used for the analysis of these contaminants.

When analyzing soil samples for Total BTX, the laboratory shall use Test Methods for Evaluating Solid Waste, commonly known as SW-846. The purge and trap procedures for the soil samples in Method 5030 shall be followed. The actual constituent analysis using gas chromatography with a photoionization detector shall follow Method 8020. The level of Total BTX reported as the sum of Benzene, Toluene, Ortho-Xylene, Meta-Xylene, and Para-Xylene found in the sample as well as the concentration of the individual compounds must be reported. The practical quantization limit for any individual constituent using this method is 0.002 parts per million for low level soil samples. All results shall be reported in parts per million.

Analysis of samples for TPH is more involved. There are three (3) methods that are used depending on the type of hydrocarbon involved.

1. For analysis of hydrocarbon mixtures such as gasoline or other low boiling hydrocarbons (70^o-180^oF), the Gasoline Range Organics Method shall be used.
2. For analysis of high boiling point hydrocarbon mixtures (180^o-450^oF) such as diesel fuel, kerosene, fuel oil #2, etc., the Diesel Range Organics Method shall be used.
3. For analysis of heavy hydrocarbon mixtures (boiling point of >450^oF) such as motor oil, used oil, etc., then either Standard Methods of Analysis Method 503 E or Methods of Analysis of Water and Wastes Method 418.1 must be used.

A review of the type of petroleum stored at the site shall be performed to determine which analytical method or methods shall be used for TPH analysis. Refer to the Table 1 below for assistance:

TABLE 1

SOIL ANALYTICAL METHODS	
1. Boiling points between 70 ^o -180 ^o F (e.g. gasoline)	Gasoline Range Organics Method (GRO)
2. Boiling points between 180 ^o -450 ^o F (e.g. diesel, kerosene)	Diesel Range Organics Method (DRO)
3. A mixture of products with one product having a boiling point between 70 ^o -180 ^o F and one having a boiling point between 180 ^o -450 ^o F (e.g. gasoline and diesel)	GRO and DRO
4. Hydrocarbon type unknown	GRO and DRO
5. Boiling points > 450 ^o F (e.g. used oil)	Method 503 E or Method 418.1

Most waste oil/motor oil UST's are in a separate area. If the waste oil UST is in the same tank pit as the gasoline and/or diesel UST's at a site, then an appropriate combination of analytical methods shall be required. If samples must be analyzed using both the Gasoline Range Organics Method (GRO) and the Diesel Range Organics Method (DRO), then the results of each analysis shall be summed (GRO + DRO) and reported as Total Petroleum Hydrocarbons TPH.

In those situations where the type of hydrocarbon stored is unknown or both gasoline and diesel products were stored, the samples must be analyzed using both the Gasoline Range Organics Method and the Diesel Range Organic Method with the results summed to determine the TPH level.

The Gasoline Range Organics Method has a practical quantization limit of 5 PPM limit for soil samples. The Diesel Range Organics Methods has a practical quantization limit of 4 PPM for soil samples. These detection limits for analysis either meet or exceed the Division's minimum action levels for soil contamination. Both Methods 503 E and 418.1 have detection limits in soil of less than 100 PPM.

E. Procedure For Determining Soil Permeability

Two (2) undisturbed soil samples (using a shelly tube) shall be collected in the unsaturated zone, within or below the zone of suspected soil contamination. These samples shall be collected from a boring located immediately adjacent to the fourth boring (B-4/MW-4) at the following depths:

1. Based upon observed soil characteristics obtained while installing the fourth boring (B-4/MW-4), the first shelly tube shall be collected at the depth that is anticipated to represent the zone of highest permeability.
2. The second shelly tube shall be collected immediately above the soil/bedrock interface or the water table, whichever occurs first.

If one (1) soil sample meets both of these criteria, then a second shelly tube sample shall be collected at the depth where the second highest permeability would be expected.

If the visual observations and the OVD screenings indicate that contamination does not exist at the fourth boring (B-4), then the undisturbed soil samples shall be collected as described in Sections E.1 and E.2 above.

The thin-walled tube sampling method (ASTM Method D1587) shall be utilized to collect the samples. The permeabilities shall be determined utilizing the Triaxial - Cell (Section 2.8) or Pressure-Chamber Permeameter (Section 2.9) Methods as described in Method 9100 of Test Methods for Evaluating Solid Waste, Third Edition (SW-846). Other collection and testing methods may be utilized only if prior approval is received from the Division.

The sample with the highest permeability shall be utilized when determining the applicable cleanup levels in Tables 2 and 3 below.

TABLE 2

BTX SOIL CLEANUP LEVELS (PPM)			
Soil Permeability	$> 10^{-4}$ CM/SEC	10^{-4} TO 10^{-6} CM/SEC	$< 10^{-6}$ CM/SEC
Drinking Water	10	50	100
Non-Drinking Water	50	250	500

TABLE 3

TPH SOIL CLEANUP LEVELS (PPM)			
Soil Permeability	$> 10^{-4}$ CM/SEC	10^{-4} TO 10^{-6} CM/SEC	$< 10^{-6}$ CM/SEC
Drinking Water	100	250	500
Non-Drinking Water	250	500	1000

If a permeability greater than 1×10^{-4} cm/sec is obtained from the testing of any soil sample within or beneath the contaminant plume, then no additional permeability testing shall be conducted and the most stringent cleanup levels shall apply.

Regardless of the soil permeability classification of a site based on performing the above procedures, the Division reserves the right to apply a more stringent cleanup level if it is deemed necessary.

F. Borehole Abandonment

All soil borings that are not converted into ground water monitoring wells shall be filled with grout. The grout shall consist of a mixture of Portland cement and 4%-6% powdered bentonite. A grout density of 13.5 to 14.1 lbs/gal shall be used. The grouting operation shall continue until the grout flowing out of the borehole has a minimum density of 13.5 lbs/gal. If water is present in the boring or the total depth of the borehole is greater than thirty (30) feet, a tremie pipe shall be utilized to place the grout. The upper two (2) feet of the boring does not have to remain filled with grout at completion and may be filled with material that is appropriate for the location.

G. Decontamination Procedures

Prior to work commencing, the drill rigs and other equipment shall be inspected for lubricant or fluid leaks which could be a potential contaminant to soil or ground water. All over-the-hole portions of the drilling equipment shall be steam cleaned prior to use and as necessary between boring locations. All down hole equipment (augers, drill rods, tools, etc.) shall be steam cleaned prior to use and between all subsequent boring locations.

All sampling equipment which is not pre-cleaned and disposable (stainless steel scoops, split spoons, etc.) and all monitoring equipment, shall be properly decontaminated before each use by the following procedure:

1. Cleaned with a laboratory grade detergent wash;
2. Triple rinsed with distilled water; and
3. Allowed to air dry.

H. Quality Assurance and Quality Control (QA/QC)

The following procedures shall be conducted for QA/QC:

1. Before each use, all sampling equipment shall be properly decontaminated.
2. Sampling personnel shall wear new, disposable sampling gloves while collecting all samples. Gloves shall be changed between each sampling point.
3. Sampling containers shall be laboratory prepared glass jars.
4. Soil shall be immediately placed in the laboratory jars in a manner to minimize headspace.
5. Soil samples collected for potential laboratory analyses shall be properly labeled and stored at 4°C or less.
6. Each jar shall be sealed separately in an airtight container (sealing plastic bag).
7. Chain of Custody forms shall be completed for each sampling event.
8. Sampling shall begin at the location where contamination is least likely to exist (background) and end at the location where the highest levels of contamination are most likely to exist (near the release).
9. All field instruments shall be calibrated daily and the calibration records maintained.

I. Data Collection

At a minimum, the following data shall be collected, recorded, and submitted to the Division in the EAR:

1. The locations of all soil borings and other sampling points on a site map drawn to scale.
2. Boring logs prepared in accordance with Technical Guidance Document - 006 "Standard Drilling Log".
3. The calculated and actual amounts of grout used to fill abandoned borings.
4. The date of abandonment.
5. Laboratory analysis sheets identifying the UST facility name, facility ID number, the sample point, analytical method, date sampled, date submitted to the laboratory, date analyzed, and the detection limit.
6. Chain of Custody forms.

II. GROUND WATER INVESTIGATION PROCEDURES

A. Number, Type and Location of Monitoring Wells

A minimum of four (4) single cased or open hole monitoring wells shall be required to begin the ground water investigation. These wells shall be constructed by converting borings B-1 through B-4 into monitoring wells.

All single cased or open hole monitoring wells shall be installed to monitor the uppermost water bearing zone.

If site specific data or geologic conditions require the monitoring of aquifers other than the uppermost, then double cased monitoring wells shall be required. To prevent the vertical movement of contaminants within a borehole or to prevent the cross contamination of multiple aquifers, double cased monitoring wells shall be installed when monitoring a separate, deeper aquifer for contamination. If conditions exist where double cased monitoring wells are required to seal off contaminant zones, the Division shall be contacted and prior approval received before proceeding.

After the installation and sampling of the first four (4) soil borings and monitoring wells the site shall be ranked in accordance with Technical Guidance Document - 014. If the owner/operator decides to proceed with the investigation or is required to based on the site ranking, additional monitoring wells may be required. These additional monitoring wells will be required if the ground water contamination has not been defined to the applicable cleanup levels. If additional monitoring wells are installed they shall not be placed within fifty (50) feet of any other monitoring wells unless prior approval has been granted by the Division.

Prior to installing additional ground water monitoring wells, the following innovative ground water investigative technologies may be used if site conditions are suitable:

1. A soil vapor survey, either active or passive, to estimate the size and location of the ground water contaminant plume and optimize the placement of additional monitoring wells; or,

2. A direct push or hydraulic push instrument to retrieve ground water samples. Once the extent of the ground water contamination is defined, additional ground water wells shall be required for future monitoring.

The Environmental Assessment Report (EAR) shall contain written documentation of the order in which each additional monitoring well was installed, the date of installation, and the rationale for the placement of each monitoring well. The rationale shall include, but not be limited to the distance, depth, and direction of the monitoring wells from all previous monitoring well, taking into consideration:

1. The estimated and/or known contaminant levels in all previously installed monitoring wells;
2. The estimated rate of contaminant migration based on site specific data gathered from all previously installed monitoring wells;
3. The estimated or known ground water flow direction and other factors that could influence the direction of the ground water contaminant plume migration;
4. The estimated and/or known rate of the decline of contaminant levels between all previously installed monitoring wells; and
5. The results of a soil vapor survey, if performed.

The objective in selecting the additional monitoring well locations is to define the outer limits of the ground water contaminant plume without installing a number of intermediate monitoring wells. Without proper rationale for the placement of additional monitoring wells, the cost of the work may not be reimbursed from the Petroleum Underground Storage Tank Fund.

B. Drilling Methods

The following drilling methods are acceptable to the Division:

1. Hollow Stem Auger
2. Air Rotary(downhole hammer or tri-cone)

The following drilling methods shall be allowed only upon special approval of the Division:

1. Mud Rotary
2. Cable Tool

3. Rock Coring
4. Wash Rotary (Tri-Cone)

C. Special Procedures for Documenting Results of Bedrock Sections

1. Camera Logging Procedures

Approval shall be received from the Division prior to camera logging any bedrock wells. Approval shall be granted on a well by well basis. All bedrock wells allowed to be camera logged shall be properly developed prior to logging. The development shall consist of purging the well with a pump to remove particulate matter derived from the drilling process. The pump shall be raised and lowered throughout the water column during purging operations. A minimum of three (3) well volumes shall be purged from the well and the well shall remain undisturbed for a minimum of twenty four (24) hours prior to logging.

All video tapes produced shall be labeled with the following information: facility name, facility ID, monitoring well number, date, time, logging company name and name of professional in charge. All logs shall have a depth indicator visible on the video image. A copy of each log shall be submitted with the EAR.

2. Rock Coring

Approval shall be received from the Division prior to rock coring any bedrock wells. Approval shall be granted on a well by well basis. The core shall be logged and photographed.

D. Single Cased Monitoring Well Installation Procedures

1. Casing and Screen Type

The casing and screen shall be constructed of two (2) inch I.D., pre-cleaned, flush threaded, Schedule 40 PVC. The screen shall have 0.01 inch factory milled slots. The well screen shall be terminated with a threaded end cap and the casing shall be terminated with a locking, watertight cap. If free product is encountered, larger diameter wells may be installed for free product recovery.

2. Screen Length and Placement

The screen length and placement shall be such that the screen intersects the water table at all times. If the screen is placed such so that ground water does not enter the well, the cost for the installation of the monitoring well may not be reimbursed from the Petroleum Underground Storage Tank Fund. Typical placement is such that seven (7) feet of screen is in the water table with three (3) feet of screen above or ten (10) feet of screen in the water table and five (5) feet of screen above. Longer screen lengths may be necessary for areas with large seasonal ground water fluctuations. A centralizer shall be used in all single cased monitoring wells with a total depth greater than twenty (20) feet.

If free product is encountered, greater screen lengths (i.e. 20 feet) may be warranted in order to allow for depression of the water table during free product removal operations provided the extra depth does not result in the breaching of a confining unit.

If a confined aquifer is encountered, the water bearing section of the aquifer shall be screened.

3. Minimum Borehole Diameter

The borehole diameter shall be a minimum of four (4) inches larger than the outside diameter (O.D.) of the well casing. For example, a 2.5 inch O.D. casing would require a 6.5 inch diameter borehole. A waiver is granted in cases if a 5.5 inch O.D. or larger core barrel will be used to drill the bedrock portion of the hole.

4. Placement and Type of Filter Pack

A minimum of six (6) inches of the filter pack material shall be placed under the bottom of the well screen to provide a firm footing. The filter pack shall extend two (2) feet above the top of the screened section. A weighted tape shall be used to help prevent bridging and ensure the proper placement of the filter pack. If the total depth of the borehole exceeds thirty (30) feet, a tremie pipe shall be utilized to properly place

the filter pack unless the well is being installed through a hollow stem auger. The filter pack shall consist of clean, washed, well sorted silica sand.

5. Placement and Type of Filter Pack Seal

The filter pack seal shall be placed atop the filter pack and have a minimum thickness of two (2) feet. The filter pack seal shall consist of a high solids, pure bentonite material. A weighted tape shall be used to help prevent bridging and ensure the proper placement of the filter pack seal. If the total depth to the top of the filter pack exceeds thirty (30) feet, a tremie pipe shall be utilized to place the filter pack seal unless the well is being installed through a hollow stem auger. If the bentonite seal is placed above the water table, two (2) gallons of potable water shall be used to hydrate the pellets. The hydration time for the bentonite pellets shall be a minimum of one (1) hour.

6. Placement and Type of Annular Grout

The annular grout shall extend from the top of the filter pack seal to within two feet of the surface. The annular grout shall consist of a mixture of Portland cement and 4%-6% powdered bentonite. A grout density of 13.5 to 14.1 lbs/gal shall be obtained and verified with a mud balance prior to placement. If water is present in the boring or the depth to the filter pack seal is greater than thirty (30) feet, a tremie pipe shall be used to place the annular grout unless the well is being installed through a hollow stem auger.

7. Surface Completion

The final two (2) feet of the annular space shall be filled with concrete terminating with a flush-mounted manhole with a watertight, bolt-down loadbearing cover unless alternate construction is approved by the Division in writing. These manholes shall be concreted in place and sloped so that surface drainage will be diverted. A locking, watertight cap shall be used if surface completion is below grade. A locking cap shall be used on all wells completed above ground level. Above ground protective covers may be used if required by site conditions. All

monitoring wells shall be clearly marked as monitoring wells and numbered.

E. Double Cased Monitoring Well Installation Procedures

1. Casing and Screen Type

The outer casing shall be decontaminated black steel. If site specific conditions and drilling methods are compatible (i.e. hollow stem auger drilling) schedule 80 PVC may be used in lieu of black steel with prior approval by the Division. The inner casing and screen shall be constructed of pre-cleaned, flush threaded, Schedule 40 PVC. The screen shall have 0.01 inch factory milled slots. The screened section shall be terminated with a threaded end cap and the casing shall be terminated with a locking, watertight cap.

2. Outer Casing Placement

The outer casing shall be set at least two (2) feet into competent bedrock, the confining layer or five (5) feet below the last indication of soil contamination, if applicable. The casing shall then be grouted into place using a bentonite/cement grout. The grout shall consist of a mixture of Portland cement and 4%-6% powdered bentonite. A grout density of 13.5 to 14.1 lbs/gal shall be used. If water is present in the boring or the total depth of the borehole is greater than thirty (30) feet, a tremie pipe shall be used to place the grout unless the well is being installed through a hollow stem auger. The grout shall be allowed to set for a minimum of 24 hours before continuation of drilling activities.

3. Screen Length and Placement

The screen length and placement shall be such that the screen intersects the water table at all times. If the screen is placed so such that ground water does not enter the well, the cost for the installation of the monitoring well may not be reimbursed from the Petroleum Underground Storage Tank Fund. Typical placement is such that seven (7) feet of screen is in the water table with three (3) feet of screen above or ten (10) feet of screen in the water table and five (5) feet of screen above. Longer screen lengths may be necessary for areas with large seasonal ground water fluctuations. A centralizer shall be used in all

monitoring wells greater than twenty (20) feet in depth. The centralizer shall be placed below the screened interval at the bottom of the well.

If free product is encountered, greater screen lengths (i.e. 20 feet) may be warranted in order to allow for depression of the water table during free product removal operations provided the extra depth does not result in the breaching of a confining unit.

If a confined aquifer is encountered, the water bearing section of the aquifer shall be screened.

4. Minimum Borehole Diameter

The outer borehole diameter shall be a minimum of 4.0 inches larger than the outside diameter (O.D.) of the well casing. For example, a 8.0 inch O.D. casing would require a 12.0 inch diameter borehole. The annular space between the inner casing and the outer casing shall also be 4.0 inches. A waiver is granted in cases where a 5.5 inch O.D. or larger core barrel will be used to drill the bedrock portion of the hole.

5. Placement and Type of the Filter Pack

A minimum of 6.0 inches of the filter pack material shall be placed under the bottom of the well screen to provide a firm footing. The filter pack shall extend two (2) feet above the top of the screened section. A weighted tape shall be used to help prevent bridging and ensure the proper placement of the filter pack. If the total depth of the borehole exceeds thirty (30) feet, a tremie pipe shall be utilized to properly place the filter pack unless the well is being installed through a hollow stem auger. The filter pack shall consist of clean, washed, well sorted silica sand.

6. Placement and Type of the Filter Pack Seal

The filter pack seal shall be placed atop the filter pack and have a thickness of two (2) feet. The filter pack seal shall consist of a high solids, pure bentonite material. A weighted tape shall be used to help prevent bridging and ensure the proper placement of the filter pack seal. If the total depth to the filter pack exceeds thirty (30) feet, a tremie pipe

shall be utilized to place the filter pack seal unless the well is being installed through a hollow stem auger. If the bentonite seal is placed above the water table, two (2) gallons of potable water shall be used to hydrate the pellets. The hydration time for the bentonite pellets shall be a minimum of one (1) hour.

7. Placement and Type of the Inner Annular Grout

The inner annular grout shall extend from the top of the filter pack seal to within two (2) feet of the surface. The annular grout shall consist of a mixture of Portland cement and 4%-6% powdered bentonite. A grout density of 13.5 to 14.1 lbs/gal shall be used. If water is present in the boring above the filter pack seal or the depth to the filter pack seal is greater than thirty (30) feet, a tremie pipe shall be used to place the annular grout unless the well is being installed through a hollow stem auger.

8. Surface Completion

The final two feet of the annular space shall be filled with concrete terminating with a flush-mounted manhole with watertight, bolt-down loadbearing cover unless alternate construction is approved by the Division in writing. These manholes shall be concreted in place and sloped so that surface drainage will be diverted. A locking, watertight cap shall be used if surface completion is below grade. A locking cap shall be used on all wells completed above ground level. Above ground protective covers may be used if required by site conditions. All monitoring wells shall be clearly marked as monitoring wells and numbered.

F. Open-Hole Well Installation Procedures

Open hole monitoring wells may be used in areas where competent bedrock is encountered and geologic conditions (e.g. karst terrain) dictate their use.

In constructing an open hole monitoring well, the surface casing shall be set at least two (2) feet into competent bedrock. The surface casing shall be black steel in all cases. The casing shall be grouted into place using a bentonite/cement grout. The grout shall consist of a mixture of Portland cement

and 4%-6% powdered bentonite. A grout density of 13.5 to 14.1 lbs/gal shall be used. If water is present in the boring or the total depth of the borehole is greater than thirty (30) feet, a tremie pipe shall be used to place the grout. The grout shall be allowed to set for a minimum of 24 hours before continuation of drilling activities.

Upon setting the surface casing, a borehole with a minimum diameter of three and one-half (3.5) inches shall be advanced to the desired depth.

The final two (2) feet of the annular space shall be filled with concrete terminating with a flush-mounted manhole with a watertight, bolt-down loadbearing cover unless alternate construction is approved by the Division in writing. These manholes shall be concreted in place and sloped so that surface drainage will be diverted. A locking, watertight cap shall be used if surface completion is below grade. A locking cap shall be used on all wells completed above ground level. All monitoring wells shall be clearly marked as monitoring wells and numbered.

G. Well Development

Monitoring well development shall not begin until at least 24 hours following completion of the well and shall continue until such time as the water column is free of visible sediment. Should development procedures not produce a water column that is sediment free, development shall continue until pH, specific conductance, and temperature have stabilized.

The following methods shall be used individually or in combination for well development:

1. Bailing
2. Pumping
3. Surging

All down-hole equipment shall be new and disposable or shall be properly decontaminated.

H. Water Level Measurements

All water level measurements, including total well depth measurements, shall be referenced from an established and documented point on the top of the well casing. Measurements shall be correlated with mean sea level datum if available and shall be measured to the nearest 0.01 foot.

Static water levels shall be measured using an electronic water level indicator. Measurements shall be taken no sooner than 24 hours after completion of well development, but prior to purging. Static water level measurements shall be taken prior to each sampling event.

If free product is encountered during water level measurements, the thickness of the free product shall be measured to the nearest 0.01 foot.

I. Ground Water Sampling

All ground water monitoring wells shall be sampled unless 0.01 foot or more of free product is encountered. In cases where free product is encountered, the depth of free product shall be documented to the nearest 0.01 foot and ground water sampling shall not be required as long as free product is present. All monitoring wells containing less than 0.01 foot of free product shall follow the sampling protocol as described in the following sections.

1. Purging

After determining the static water level of the well, but prior to collecting a sample, the total volume of water standing in the well shall be calculated. A minimum of three (3) well volumes shall then be purged from the well. If the well is purged to dryness before three (3) well volumes are obtained, no further purging shall be required. The samples shall then be collected as soon as a sufficient volume of ground water recharges into the well.

2. Sample Containers and Preservation

Sample containers shall be as follows:

TABLE 4

Sample Containers and Preservatives		
Parameter	Container	Preservative
BTX	40 ml amber glass vial with Teflon lined septa	four (4) drops of 1:1 hydrochloric acid
TPH, Gasoline Range Organics	40 ml amber glass vial with Teflon lined septa	200 uL of 50% hydrochloric acid
TPH, Diesel Range Organics	1 liter amber glass bottle with Teflon lined lid	five (5) ml of 1:1 hydrochloric acid

All sample containers shall be pre-cleaned and sealed by the distributor or laboratory. Each sample bottle shall be preserved with the proper preservative (e.g. HCL) prior to sample collection.

3. Collection Method

All samples from ground water monitoring wells shall be collected with a new, disposable bailer. In order to keep agitation of the sample to a minimum, the bailer shall be slowly lowered into the water column. When transferring the sample from the bailer to the sample container, care shall be taken to minimize agitation. When collecting volatile organic samples, the sample container shall be completely filled so that no air bubbles are trapped inside. Care shall also be taken to have minimal overflow so that the preservative is not lost.

Upon collection, samples shall be immediately labeled, placed in a cooler and chilled to approximately 4°C. The samples shall be maintained at 4°C until they are delivered to a state approved laboratory.

No sampling equipment shall be placed directly on the ground or other possibly contaminated surface prior to insertion into a well. A clean plastic sheet or other appropriate material shall be placed by each well for all sampling equipment.

4. Chain of Custody

A chain of custody form shall be completed for each ground water sample point. This form shall be signed by the person collecting the sample, the laboratory receiving the sample, and all intermediary persons with possession of the sample. Sample security shall be maintained during all phases of transport.

J. Disposal of Purge and Development Water

All purge and development water shall be managed in a manner such that these materials will not cause pollution and disposal is in accordance with all applicable State and Federal Laws.

K. Analytical Methods

For investigations involving petroleum UST's, the two (2) primary types of analyses performed are Total Benzene, Toluene, and Xylene (BTX) and Total Petroleum Hydrocarbons (TPH). To prevent variances of methods used for analyses of this type, specific methods shall be used for the analysis of these contaminants.

When analyzing water samples for BTX, the laboratory shall use Test Methods for Evaluating Solid Waste, commonly known as SW-846, as follows:

1. The purge and trap procedures for the water samples in Method 5030 shall be performed; then
2. The actual constituent analysis shall be performed using gas chromatography with a photoionization detector following method 8020.

The level of BTX shall be reported individually as Benzene, Toluene, and Total Xylene found in the sample. The practical quantization limit for any individual constituent using this method is 0.002 parts per million for ground water samples. All results shall be reported in parts per million.

Analysis of samples for TPH is more involved. There are three (3) methods that are used depending on the type of hydrocarbon involved.

1. For analysis of hydrocarbon mixtures such as gasoline or other low boiling hydrocarbons (70^o-180^oF), the Gasoline Range Organics (GRO) Method shall be used.
2. For analysis of high boiling point hydrocarbon mixtures (180^o-450^oF), such as diesel fuel, kerosene, fuel oil #2, etc. the Diesel Range Organics (DRO) Method shall be used.
3. For analysis of heavy hydrocarbon mixtures (boiling point of >450^oF) such as motor oil, used oil, etc. then either Standard Methods of Analysis Method 503 E or Methods of Analysis of Water and Wastes Method 418.1 shall be used.

A review of the type of petroleum stored at the site shall be performed to determine which analytical method or methods shall be used for TPH analysis. Refer to the Table 5 below for assistance:

TABLE 5

GROUND WATER ANALYTICAL METHODS	
1. Boiling points between 70 ^o -180 ^o F (e.g. gasoline)	Gasoline Range Organics Method (GRO)
2. Boiling points between 180 ^o -450 ^o F (e.g. diesel, kerosene)	Diesel Range Organics Method (DRO)
3. A mixture of products with one product having a boiling point between 70 ^o -180 ^o F and one having a boiling point between 180 ^o -450 ^o F (e.g. gasoline and diesel)	GRO and DRO
4. Hydrocarbon type unknown	GRO and DRO
5. Boiling points > 450 ^o F (e.g. used oil)	Method 503 E or Method 418.1

Most waste oil/motor oil UST's are in a separate area. If the waste oil UST is in the same tank pit as the gasoline and/or diesel UST's at a site, then an appropriate combination of analytical methods shall be required. If samples must be analyzed using both the Gasoline Range Organics Method (GRO) and The Diesel Range Organics Method (DRO), then the results of each analysis

shall be summed (GRO + DRO) and reported as Total Petroleum Hydrocarbons (TPH).

In those situations where the type of hydrocarbon stored is unknown or both gasoline and diesel products were stored, the samples shall be analyzed using both the Gasoline Range Organics Method and the Diesel Range Organic Method with the results summed to determine the TPH level.

The Gasoline Range Organics Method has a practical quantization limit of 0.1 PPM for water samples. The diesel Range Organics Methods has a practical quantization limit of 0.1 PPM for water samples. These detection limits for analysis meet the Division's minimum action levels for ground water contamination.

Neither Method 503 E nor Method 418.1 used for waste oil analysis will meet the Divisions 0.1 PPM TPH limit for ground water. Both methods have a practical quantization limit of 1.0 PPM for water samples, therefore the Division shall only require that actions be taken involving waste oil in ground water if the TPH level exceeds 1.0 PPM.

L. Ground Water Classification Procedure

The following steps shall be performed, IN SEQUENCE, to determine if the ground water at a site should be classified as either a "drinking water supply" or a "non-drinking water supply". If at any point during the classification procedure the aquifer or water supply is classified as a drinking water supply, then no further steps shall be completed. Refer to Table 6 below, to determine the applicable cleanup levels based upon the Ground Water Classification.

1. Water Use Survey

Perform a water use survey within a one half (.5) mile radius of the UST site. The following actions shall take place at a minimum:

1. Contact all adjacent property owners to determine the existence of any water use supplies;

2. Perform a field survey within a one quarter mile radius of the UST site to determine the existence of any water use supplies; and
3. Perform a records search within a one half (.5) mile radius of the UST site to determine the existence of any water use supplies.

If any water supply is found within this one half (.5) mile radius of the UST site, justification may be presented in the EAR as to why the water supply should not be used in classifying the impacted aquifer or water source as a "drinking water supply". The justification shall include but not be limited to the, direction of ground water flow and the geologic characteristics of the impacted area.

If any impacted aquifer or water source is being used by the citizens of the state, then the impacted aquifer or water source shall be classified as a "drinking water supply".

2. Analytical Sampling

Determine if the impacted aquifer or water source meets the primary and secondary drinking water standards of rule 1200-5-1, by analyzing the water from a well which has not been impacted by petroleum contamination, if one exist. If an unaffected well does not exist then the well with the lowest contamination shall be used. The Division reserves the right to require additional analysis from a monitoring well installed at a later date if the initial analysis was performed from an impacted well.

If the impacted aquifer or water source fails to meet any of the primary or secondary standards and is not a drinking water supply as determined in the water use survey, it may be classified as a "non-drinking water supply". However, failure of the aquifer or water source to meet the primary or secondary standards cannot be the result of petroleum contamination, unless naturally occurring. A list of the primary or secondary drinking water standards can be found in Technical Guidance Document - 002.

3. Pump Test

If the ground water meets the criteria of the primary and secondary Drinking Water Standards, then the yield of the aquifer or water supply shall be determined. A suitable pump test method shall be used to determine if the impacted aquifer or water source is capable of providing a yield of at least one-half gallon per minute. The monitoring well considered to have the highest yield shall be the first well pump tested. If this first well does not yield at least one-half gallon per minute, all additional monitoring wells shall be pump tested until either all wells have been tested or one well yields at least one-half gallon per minute. If the impacted aquifer or water source is not able to produce water at the rate of one-half gallon per minute and is not a drinking water supply (as determined in the water use survey), it may be classified as a "non-drinking water supply".

TABLE 6

GROUND WATER CLEANUP LEVELS (PPB)		
	Benzene	TPH
Drinking Water	5	100
Non-Drinking Water	70	1000

Regardless of the ground water classification of a site based on performing the above procedures, this Division reserves the right to apply a more stringent cleanup level if it is deemed necessary.

M. Decontamination Procedures

Before use, the drill rigs and other equipment shall be inspected for lubricant or fluid leaks which could be potential contaminant sources. All over-the-hole portions of the drilling equipment shall be steam cleaned prior to use and as necessary between boring locations. All down hole equipment (augers, drill rods, tools, etc.) shall be steam cleaned prior to use and between all subsequent boring locations.

All sampling equipment which is not pre-cleaned and disposable and all monitoring equipment shall be properly decontaminated before each use by the following procedure:

1. Cleaned with a laboratory grade detergent wash;
2. Triple rinsed with distilled water; and
3. Allowed to air dry.

All black steel well casing to be used in well construction shall be decontaminated by steam cleaning prior to use.

N. Monitoring Well Abandonment Procedures

Upon completion of site investigations and/or corrective actions and as directed by the Division, all monitoring wells shall be properly abandoned. Proper abandonment procedures are as follows:

1. The monitoring well casing shall be filled from bottom to top with a grout mixture consisting of Portland cement and 4%-6% powdered bentonite. A grout density of 13.5 to 14.1 lbs/gal shall be used. The grout shall be placed using a tremie pipe.
2. The casing shall be cut off approximately two (2) feet below ground level and the remainder of the hole shall be filled with an appropriate material (i.e. concrete, native soil, etc.).

O. Quality Assurance and Quality Control (QA/QC)

The following procedures shall be conducted for QA/QC:

1. All equipment used for purging monitoring wells and collecting ground water samples shall be properly decontaminated.
2. Sampling personnel shall wear new disposable sampling gloves while collecting all samples. Gloves shall be changed between sampling points.
3. Sampling containers shall be laboratory prepared glass bottles or vials.
4. Ground water samples shall be immediately placed in the laboratory bottles or vials in a manner to minimize headspace.

5. All ground water samples collected for laboratory analyses shall be immediately labeled and stored at 4°C or less.
6. Chain of Custody forms shall be completed for each sampling event.
7. Sampling shall begin at the location where contamination is least likely to exist (background) and end at the location where the highest levels of contamination are most likely to exist (near the release).
8. When sampling monitoring wells, one (1) duplicate sample shall be collected during each sampling event.

P. Data Collection

The following data shall be collected, recorded and submitted to the Division in the EAR:

1. The location of all monitoring wells on a site map drawn to scale;
2. Boring logs prepared in accordance with Technical Guidance Document - 006 "Standard Drilling Log";
3. Survey the top of the well casing and establish elevation in relation to mean sea level (MSL);
4. The exact lengths of the casing and slotted section of the screen in each well;
5. The depth from the surface to bottom and top of the filter pack, bentonite seal, and annular grout;
6. The location below ground level of all centralizers;
7. The distance to the top of casing either above or below the ground surface;
8. The depth from the top of casing to the static water level;
9. A table showing the calculated amount of filter pack, bentonite seal, and grout needed to construct each well verses the actual amount used;

10. The method and length of time of development;
11. Thickness of free product in each well;
12. The water level in each well prior to purging;
13. The calculated and actual amount of water purged from each well;
14. Visible observation of the sample;
15. Laboratory analysis sheets identifying the facility name, facility ID number, the sample point, analytical method, date sampled, date submitted to the laboratory, date analyzed, and the detection limit;
16. Chain of Custody forms; and
17. A comprehensive ground water sampling event shall be conducted utilizing all monitoring wells that have been installed during the investigation.

III. SITE SAFETY PLAN

A Site Safety Plan shall be developed and kept on site at all times work is being performed. It shall be written to avoid misinterpretation. All personnel shall be familiar with all information contained in the Site Safety Plan. At a minimum the plan shall contain the following:

A. Description of Known Hazards and Risks

This shall include all known or suspected physical and chemical hazards. It is important that all health related data be kept up-to-date. As air, water, soil, or hazardous substance monitoring and sampling data becomes available, it shall be evaluated, significant risk or exposure to workers noted, potential impact on the public assessed, and changes made in the plan. These evaluations need to be repeated frequently since much of the plan is based on this information.

B. Designation of Key Personnel and Alternatives

The plan shall identify the incident manager, as well as the site safety and health officer (and alternate) and any other personnel responsible for the site safety. It shall also identify key personnel assigned to various site operations.

C. Designation of the Levels of Protection

The Levels of Protection to be worn at the locations on-site or by work functions shall be designated. This includes the specific types of respirators and type of chemical protective clothing to be worn for each level. No one shall be permitted in the areas requiring personnel protective equipment unless they have been trained in its use and are wearing it.

D. Delineation of the Work Area

Work areas need to be designated on the site map and the map posted. The size of the zone, the zone boundaries, and access control points into the zone shall be marked and made known to all site workers.

E. Description of Control Procedures

Control procedures shall be implemented to prevent unauthorized access. Procedures shall be established to control authorized personnel entering work zones where personnel protection is required.

F. Requirements for an Environmental Surveillance Program

A program to monitor site hazards shall be implemented. This shall include air monitoring and sampling, other types of media sampling at or around the site that shall identify chemicals present, their hazards, possible routes of migration off-site, and associated safety requirements.

G. Requirements for Routine of Special Training

Personnel shall be trained not only in general safety procedures and use of safety equipment, but in any special work they may be expected to do.

H. Procedures for Weather-Related Problems

Weather conditions can affect site work. Temperature extremes, high winds, storms, etc. impact personnel safety. Work practices shall be established to protect workers from the effects of weather and shelters provided, when necessary. Temperature extremes, especially heat and its effect on people wearing protective clothing, shall be considered and procedures established to monitor for and minimize heat stress.

I. Determination of Site Specific Medical Requirements

Specialized medical requirements due to unusual hazards expected or known to be encountered shall be determined.

J. On-site Emergencies

The plan shall address site emergencies - occurrences that require immediate actions to prevent additional problems or harm to responders, the public, property, or the environment. Unpredictable events such as fire, chemical exposure, or physical injury may occur and shall be anticipated. The plan shall contain detailed information for managing these contingencies.

To accomplish this, the contingency plan shall:

1. Establish site emergency procedures

- a. List the names and emergency functions of on-site personnel responsible for emergency actions along with the special training required.
- b. Post the location of the nearest telephone (if none are present on the site).
- c. Provide alternative means for emergency communications.
- d. Provide a list of emergency services organizations that may be needed. Names, telephone numbers, and locations shall be posted. Arrangements for using emergency organizations may need to be made beforehand. Organizations that might be needed are:
 - i. Fire and Rescue Agency
 - ii. Police Department
 - iii. Local hazardous material response units
 - iv. Emergency Services Offices
- e. Address and define procedures for the rapid evacuation of workers. Clear, audible warning signals shall be established. Well-marked emergency exits shall be located throughout the site. Internal and external communications plans shall be developed.
- f. A complete list of emergency equipment shall be attached to the safety plan. This list shall include emergency equipment available on-site, as well as all available medical, rescue, transport, fire-fighting, and mitigating equipment available off-site.

2. Address emergency medical care

- a. Determine the location of the nearest hospital or emergency care facility and determine their capability to handle chemical exposure cases.
- b. Post the location of medical or emergency care facilities, travel time, directions, and telephone numbers.
- c. Determine nearest ambulance service and post the telephone number.
- d. Maintain accurate records of any exposure or potential exposure of site workers during an emergency (or routine operations).
- e. Advise workers of their duties during an emergency. In particular, it is imperative that the site safety officers practice emergency procedures.
- f. Establish procedures, in cooperation with local and state officials if appropriate, for evacuating residents who live or work near the site.

**TENNESSEE DEPARTMENT OF
ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND
STORAGE TANKS**



**ENVIRONMENTAL
ASSESSMENT
REPORT
GUIDELINES**

JANUARY 1994

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS
ENVIRONMENTAL ASSESSMENT REPORT
GUIDELINES**

Instructions:

The Environmental Assessment Report (EAR) is due within one hundred and twenty (120) calendar days after the Responsible Party has been directed by the Division to begin an investigation. The EAR shall contain all data gathered during field activities. The full extent of petroleum contamination shall be identified to the applicable levels unless the site ranking indicated no need for further assessment activities and the owner/operator concurs. The planning of the environmental assessment activities and evaluation of the subsurface investigation shall be conducted by a geologist or professional geologist as defined under Tennessee Code Annotated 62-36-101 or a duly licensed Professional Engineer in Tennessee.

If the activities necessary to complete the EAR have not been performed by the established deadline, a written extension request shall be submitted to the appropriate field office and the central office. The extension is not automatic and enforcement actions may be taken to insure prompt compliance with established deadlines. Failure to meet established deadlines may place the responsible party out of substantial compliance and may result in the loss of fund coverage.

Each section of the EAR shall be assembled in the order presented within these guidelines. Each section shall contain a prepared text that includes the required elements of the section. This text shall provide explanations of the associated tables, maps, and address all variations from the procedure detailed in the Environmental Assessment Guidelines (EAG) provided by the Division. All maps and tables shall be in the section in which they are intended, not in appendices. All maps shall be drawn to scale on 11 x 17 inch paper (maximum) and contain at a minimum a north arrow, legend, scale bar, vertical scale if applicable and figure number. These guidelines are intended to provide a structured outline. Any information that is not specifically requested but is relevant to the project shall also be included. The preparer shall assemble the required information in each section so as to provide a comprehensive and cohesive final document. All pages of the report, including the tables and figures, shall be consecutively numbered. Each section and subsection heading must be clearly printed in the report. A table of contents shall be provided listing the location of all sections, maps, tables, and appendices.

IMPORTANT NOTE: All correspondence, reports, laboratory analysis sheets, etc. shall contain the TN UST Facility ID Number. A copy of all correspondence and reports shall be submitted to the UST central office and the appropriate field office. Photostatic copies of the laboratory analysis sheets are not acceptable unless the originals have previously been submitted in another report.

Environmental Assessment Report

Executive Summary

Provide an Executive Summary describing the findings of the project to date. Include conclusions and interpretation of data derived from implementing the environmental assessment activities.

A. Introduction

Give a brief site history stressing information that has not been previously stated in prior reports or information that has been revised based upon new findings, include the following, at a minimum:

1. The estimated or known quantity of the release based upon the size of the contaminant plume(s) and the inventory records;
2. A summary of all initial abatement actions taken;
3. A summary of actions taken to identify and eliminate the sources of contamination; and,
4. The results of the Site Ranking completed in accordance with Technical Guidance Document (TGD)-014. Provide the completed Site Ranking document in an appendix.

B. Site Location

1. Provide a vicinity map showing the site location including all adjacent streets, nearby buildings, subsurface structures and utilities.
2. Provide a site map including tank and line locations (indicate former tank systems with a dashed line), underground utilities, boring and monitoring well locations, etc. This map shall also include Line A-A' which shall be a line parallel to the direction of ground water flow and Line B-B' which shall be perpendicular to the direction of ground water flow. These lines shall intersect as many soil borings and/or monitoring wells as possible. These lines shall be used for all subsequent cross sectional maps and shall

therefore represent, as closely as possible, the widest areas of the soil and ground water contaminant plumes.

3. Provide a color topographic map with the site location indicated. Black and white copies shall not be used. This map may be on 8.5 x 11 inch paper.
4. Provide a description of the local topography and any effects it may have on contaminant migration at the site.

C. Soil Investigation

If more than four (4) soil boring were necessary, provide the order in which each additional boring was installed, the date of installation, and the rationale for the placement of each additional boring. Without proper rationale for the number and placement of additional borings, the cost for the work may not be reimbursed by the Petroleum Underground Storage Tank Fund.

The rationale shall include, but not be limited to the distance, depth, and direction of the borings from all previously installed borings, taking into consideration:

- a. The estimated and/or known contaminant levels in all previously installed borings;
- b. The estimated rate of contaminant migration based on site specific data gathered from all previously installed borings;
- c. The estimated or known ground water flow direction and other factors that could influence the direction of the soil contaminant plume migration;
- d. The estimated and/or known rate of the decline of contaminant levels between all previously installed borings; and
- e. The results of a soil vapor survey, if performed.

1. Geology

- a. A description of the regional geologic section;
- b. A description of the geologic section at the site;
- c. A description of the soil and/or bedrock lithologies encountered at the site;
- d. A plan view map showing the bedrock contour, if applicable;
- e. Cross sectional maps (drawn to scale, along both Line A-A' and B-B') showing the soil and bedrock lithologies; and,
- f. The dip and strike of the rock formations encountered.

2. Soil Boring Results

- a. Describe the methods used to drill and sample all soil borings.
- b. Provide detailed boring logs in an appendix. Label and reference all appendices. See TGD-006, for items that shall be included in a boring log.

3. Analytical Results

All soil analytical results from every sampling event (i.e., closure, site check, environmental assessment, etc.) shall be included in a table along with the following information:

- a. Boring number or location of additional sampling points;
- b. Date sample was collected;
- c. Sample depth;
- d. Parameter (i.e. BTX or TPH);
- e. Unit of measurement (Parts Per Million, PPM); and,
- f. The applicable cleanup levels.

Provide all laboratory analysis sheets in an appendix. Label and reference all appendices. Include the TN UST Facility ID Number on all analysis sheets. The chain of custody sheets shall also be included in the appendix.

Photostatic copies of the laboratory analysis sheets are not acceptable unless the originals have previously been submitted in another report.

4. Soil Cleanup Levels

Provide the following information to establish the applicable cleanup level:

- a. The depths at which the undisturbed soil samples (shelby tube) were collected and the rationale used to select the sampling depths;
- b. The procedure used to collect the samples;
- c. The laboratory method used to determine the soil permeability and the rationale used to select the test method;
- d. The laboratory used to determine the soil permeability;
- e. The laboratory permeability results, in centimeters per second (cm/sec); and,
- f. The soil cleanup level(s) deemed appropriate for this site based upon the soil permeability and the ground water classification.

All laboratory analysis sheets shall be included in an appendix. Label and reference all appendices.

Regardless of the calculated soil permeability classification, the Division reserves the right to apply more stringent cleanup levels, if deemed necessary.

5. Soil Contaminant Plume Maps

Proper rationale shall be provided if extrapolation was used to predict the extent of contamination to the applicable cleanup levels.

-
- a. Provide two (2) plan view maps (drawn to scale) one showing the horizontal extent of BTX contamination and the other showing the TPH contamination including the following at a minimum:
- i. The location of the existing and/or former UST (indicate former UST system with dashed lines) system and existing underground utilities (sewer, water, telephone, etc.); and,
 - ii. The location of all soil borings and monitoring wells along with the appropriate identification and the contaminant concentrations.
- b. Provide two (2) cross sectional maps (drawn to scale) representing Line A-A' and Line B-B' respectively. Separate maps shall be prepared for BTX and TPH. Each shall include the following, at a minimum:
- i. The location and depth of all soil borings and monitoring wells, along the respective line, with the appropriate identification;
 - ii. The locations at which soil samples were collected for laboratory analysis and their corresponding results;
 - iii. The organic vapor detector (OVD) readings from all screened soil samples;
 - iv. The vertical extent of BTX and/or TPH soil contamination to the applicable cleanup level, using labeled isopleths to delineate the extent of contamination;
 - v. The potentiometric surface;
 - vi. The bedrock profile, if encountered; and,
 - vii. The elevation at which ground water was first encountered.

6. Estimate of Contaminant Mass

Based upon the volume of contaminated soil and the concentration gradients as defined through the installation of soil borings, estimate the total mass of TPH in the soil. (Show calculations)

D. Ground Water Investigation

If more than four (4) ground water monitoring wells are necessary, list the order in which each additional monitoring well was installed, the date of installation and the rationale for the placement of each additional monitoring well. Without proper rationale for the number and placement of additional monitoring wells, the cost for the work may not be reimbursed by the Petroleum Underground Storage Tank Fund. The rationale shall include, but not be limited to the distance, depth, and direction of the monitoring well from all previous monitoring wells, taking into consideration:

- a. The estimated and/or known contaminant levels in all previously installed monitoring wells;
- b. The estimated rate of contaminant migration based on site specific data gathered from all previously installed monitoring wells;
- c. The estimated or known ground water flow direction and other factors that could influence the direction of the ground water contaminant plume migration;
- d. The estimated and/or known rate of the decline of contaminant levels between all previously installed monitoring wells; and
- e. The results of a soil vapor survey, if performed.

1. Hydrogeology

- a. Describe the occurrence and movement of ground water at the site and its relationship to both soil and ground water contamination. Include conclusions concerning the relationship of this site to any areas of off-site contamination, if applicable.

-
-
- b. Describe the occurrence and movement of free product at the site. Include estimated quantities, source(s), pathways of migration and estimates of travel time, if applicable.
 - c. Provide a water level data table for each sampling event containing the following, at a minimum:
 - i. Monitoring well number;
 - ii. Date measured ;
 - iii. Total depth of well;
 - iv. Top of casing elevation relative to MSL;
 - v. Depth from top of casing to free product;
 - vi. Depth from top of casing to water;
 - vii. Thickness of free product;
 - viii. Potentiometric surface elevation relative to MSL; and,
 - ix. Adjusted potentiometric surface elevation relative to MSL.

All ground water measurements previously recorded shall be represented in this table.

- d. Provide two (2) potentiometric maps (drawn to scale) derived from data collected at least thirty (30) days apart. If multiple aquifers are investigated due to the presence of contamination in a deeper aquifer and sufficient data is generated, potentiometric maps shall be included for each. These maps shall also include arrow(s) depicting the interpreted direction of ground water flow.
- e. Provide the highest calculated hydraulic gradient in ft/day (Show calculations).
- f. Provide the calculated ground water flow rate(s) using the following equation. For all estimated values include a justification and reference (Show calculations).
- g. Provide the results of any slug or pump tests.

2. Monitoring Well Construction

- a. Describe the monitoring well installation procedures.

- b. Provide a table showing the calculated volumes of the well construction materials such as sand, bentonite and grout versus the actual volumes used. If the actual and the calculated volumes differ by more than 10%, provide an explanation for the difference.

3. Well Development

Describe the procedures used to develop all monitoring wells. Provide a description of how the development water was managed.

4. Monitoring Well Sampling

Describe the procedures used to sample all monitoring wells including purging, sampling, and chain of custody protocols.

5. Analytical Results

Provide all ground water analytical results, from every sampling event (i.e., closure, site check, environmental assessment, etc.) in a table containing the following information, at a minimum:

- a. Monitoring Well number or location of additional sampling points;
- b. Date sample was collected;
- c. Parameter (i.e. Benzene, TPH, etc.);
- d. Unit of measurement (Parts Per Million, PPM); and,
- e. The applicable cleanup levels.

Provide all laboratory analysis sheets in an appendix. Label and reference all appendices. Include the TN UST Facility ID Number on all laboratory analysis sheets. A copy of the chain of custody sheets shall also be in the appendix.

Photostatic copies of the laboratory analysis sheets are not acceptable unless the originals have previously been submitted in another report.

6. Ground Water Classification Procedures

Provide the following information to establish the applicable cleanup levels.

a. Data from the Water Use Survey

- i. Provide a map showing the location of all water supplies within a one half (.5) mile radius of the release site.
- ii. Describe the steps that were taken to perform the water use survey.

If any water supply is found within a one half (.5) mile radius of the UST site, justification may be provided describing why the water supply should not be used in classifying the impacted aquifer or water source as a "drinking water supply". The justification shall include but not be limited to the direction of ground water flow and the hydrogeologic characteristics.

b. Data From The Analytical Sampling (If necessary)

Provide a table summarizing all analytical results used to determine if the impacted aquifer or water supply met the primary or secondary drinking water standards. This table shall contain, at a minimum, the actual concentration, the applicable primary or secondary standard, and the number of the well from which each water sample was taken.

Provide all of the laboratory analysis sheets in an appendix. Label and reference all appendices.

c. Data from the Pump Test (If necessary)

- i. Describe the pump test method which was used to determine the yield of the impacted aquifer or water supply.
- ii. Describe the rationale used for selecting the pump test method.
- iii. Provide a table summarizing the results of the pump test for each well that was tested. The results shall be reported in gallons per minute (GPM).

d. Applicable Cleanup Levels

Based upon the ground water classification, list the ground water cleanup level(s) deemed appropriate for this site.

Regardless of the ground water classification, the Division reserves the right to apply more stringent cleanup levels, if deemed necessary.

7. Ground Water Contaminant Plume Maps

All contaminant plumes shall be defined to the applicable cleanup levels as determined in Section II of the Environmental Assessment Guidelines. Proper rationale shall be provided if extrapolation was used to predict the full extent of contamination to the applicable cleanup levels.

- a. Provide two (2) plan view maps (drawn to scale) one showing the horizontal extent of benzene contamination and the other showing the TPH contamination to the applicable cleanup levels including the following, at a minimum:
- i. The location of the existing and/or former UST system (indicate former UST system with dashed lines) and existing underground utilities (sewer, water, telephone, etc.);
 - ii. The location of all soil borings and monitoring wells, along with the appropriate identification and the contaminant levels;
 - iii. The horizontal extent of any free phase product.
- b. Provide two (2) cross-sectional maps (drawn to scale) representing Line A-A' and Line B-B' respectively. Separate maps shall be prepared for benzene and TPH. Each shall include the following, at a minimum:

- i. The location and depth of all soil borings and monitoring wells, along the respective line, with the appropriate identification;
- ii. The location of the screened portion of the monitoring wells;
- iii. The extent of Benzene and/or TPH ground water contamination to the applicable cleanup level, using labeled isopleths to delineate the extent of contamination;
- iv. The potentiometric surface;
- v. The bedrock profile and any fractures, voids or relevant features in the bedrock, if encountered; and,
- vi. The elevation at which ground water was first encountered.

8. Estimate of Contaminant Mass

Based upon the volume of contaminated ground water and the concentration gradients as defined through the installation of monitoring wells, estimate the total mass of Benzene and TPH in the ground water. (Show calculations)

9. Corrective Action Plan Cost Estimate

The Cost Estimate Cover Sheet and Report Preparation Cost Estimate Form (see attachments) shall be included with the EAR. The costs incurred to date for all previous activities and an estimate of the costs to complete the Corrective Action Plan shall be summarized on the Cost Estimate Cover Sheet. A detailed breakdown of the estimated costs shall be presented in the Corrective Action Cost Estimate Form.

TENNESSEE UST COST ESTIMATE COVER SHEET



FACILITY INFORMATION

Facility Name _____ Facility ID# _____
 Address _____ () _____
 street city zip phone

CORRECTIVE ACTION CONTRACTOR

Name _____
 Address _____
 street city state zip
 Contact Person _____ () _____
 phone

COSTS

Submit with ISCR	Estimated Costs	Actual Costs
Site Check		
Initial Abatement / Emergency Response		
Free Product Recovery		
Initial Site Characterization		
Environmental Assessment		
Environmental Assessment Report		

Signature of Person Completing Estimate _____ Date _____

Signature of Owner/Operator _____ Date _____

Submit with EAR	Estimated Costs	Actual Costs
Environmental Assessment		
Environmental Assessment Report		
Corrective Action Plan		

Signature of Person Completing Estimate _____ Date _____

Signature of Owner/Operator _____ Date _____

Submit with CAP	Estimated Costs	Actual Costs
Corrective Action Plan		
Corrective Action		
Monitoring		
Operation & Maintenance		
Closure		

Signature of Person Completing Estimate _____ Date _____

Signature of Owner/Operator _____ Date _____

**TENNESSEE DEPARTMENT OF
ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND
STORAGE TANKS**



**CORRECTIVE
ACTION PLAN
GUIDELINES**

JANUARY 1994

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION**DIVISION OF UNDERGROUND STORAGE TANKS****CORRECTIVE ACTION PLAN****GUIDELINES****INSTRUCTIONS:**

A Corrective Action Plan (CAP) shall be prepared and submitted upon completion of the Environmental Assessment Report (EAR) if required. The CAP shall be received within one hundred and fifty (150) calendar days after the Responsible Party has been directed by the Division of Underground Storage Tanks (the Division) to begin an environmental investigation. A Geologist or Professional Geologist, as defined under T.C.A. 62-36-101, or a duly licensed Professional Engineer shall be retained to supervise all geologic work specified in this document. A duly licensed Professional Engineer shall be retained to oversee all corrective action design specifications. This plan shall contain a discussion of the three most technologically feasible and reliable corrective action options which were considered. This plan shall describe in detail the specifications of these corrective actions along with a detailed, itemized cost summary. Keep in mind that the corrective actions chosen shall be the most cost effective options that are technologically feasible and reliable.

If the contaminant plumes are not defined by the established deadline, this plan shall NOT be submitted, but a written, justified extension request shall be submitted to the appropriate field office and the central office. The extension is not automatic and enforcement actions may be taken to insure prompt compliance with established deadlines. Failure to meet established deadlines may place the responsible party out of substantial compliance and may result in the loss of fund coverage.

Each section of the CAP must be assembled in the order presented within these guidelines. Each section shall contain a prepared text that includes the required elements of the section. This text shall provide explanations of the associated tables and maps. All maps and tables shall be in the section in which they are intended, not in appendices. All maps shall be drawn on 11 x 17 inch paper (maximum) and contain at a minimum a north arrow, legend, scale bar, vertical scale if applicable and figure number. These guidelines are intended to provide a structured outline. Any information that is not specifically requested but is relevant to the project shall also be included. The preparer shall assemble the information provided in each section so as to provide a comprehensive and cohesive final document. Each section and subsection heading must be clearly printed in the report. A table of contents shall be provided listing the location of all sections, maps, tables and appendices.

If no soil or ground water contamination above the applicable cleanup levels was found, no further action is necessary and the CAP does not need to be completed. If only soil or only ground water contamination is present above the applicable cleanup levels, only the relevant portions of the CAP need be completed.

If the responsible party believes the site should not be subject to the applicable cleanup requirements detailed in Appendices 3 and 4 of the UST Regulations, then the responsible party may petition the Commissioner for a Site Specific Standard as outlined in Rule 1200-1-15-.06(7)(e)5. & 6. The requirements for requesting a Site Specific Standard are listed in Technical Guidance Document - 008. If the responsible party intends to petition for a Site Specific Standard, the request should be submitted in lieu of the CAP by the established deadline.

IMPORTANT NOTE: All correspondence, reports, laboratory analysis sheets, etc. shall contain the TN UST Facility ID Number. A copy of all correspondence and reports shall be submitted to the UST central office and the appropriate field office.

CORRECTIVE ACTION PLAN (CAP)

This Corrective Action Plan shall provide information concerning the three most technologically feasible and reliable corrective action options that were evaluated and the detailed specifications and costs. The Cost Estimate Cover Sheet and Corrective Action Cost Estimate Form (see attachments to CAP) shall be included with the CAP. The costs incurred to date for all previous activities shall be included on the Cost Estimate Cover Sheet. A detailed breakdown of the estimated costs of the three most technologically feasible and reliable corrective actions for soil and ground water shall be presented in Corrective Action Cost Estimate Form. This section shall be completed only after all contaminant plumes have been fully defined to the applicable cleanup levels.

A. APPLICABLE CLEANUP LEVELS

State the applicable cleanup levels for soil and/or ground water as determined in the Environmental Assessment Report.

B. CORRECTIVE ACTIONS CONSIDERED

1. SOIL

Summarize the three most technologically feasible and reliable corrective action options considered to fully remediate petroleum contaminated soil to the applicable cleanup levels. Include for each option considered, the projected time for completion of remediation. Briefly describe the advantages and disadvantages of each option as they relate to this project. In addition to the technological considerations, any capital costs for equipment, operation and maintenance costs, life expectancy of equipment and installation costs shall be discussed.

2. GROUND WATER

Summarize the three most technologically feasible and reliable corrective action options considered to fully remediate petroleum contaminated

ground water to the applicable cleanup levels. Include for each option considered, the projected time for completion of remediation. Briefly describe the advantages and disadvantages of each option as they relate to this project. In addition to the technological considerations, capital costs for equipment, operation and maintenance costs, life expectancy of equipment and installation costs shall be discussed.

C. CORRECTIVE ACTIONS CHOSEN

1. SOIL CORRECTIVE ACTIONS

Provide a description of the corrective action option(s) chosen for soil remediation. Specify why this system or method is best suited for remediation at this site including the life expectancy of the project and the calculated effective radius of influence (show calculations). If a soil venting system is to be used, a minimum vacuum of 1 inch of water shall be used to define the effective radius of influence. If a soil venting system is not proposed, provide justification as to why this option is not technologically feasible or cost effective. Provide a map showing the calculated effective radius of influence of the remediation system overlaid on maps of the horizontal and vertical contaminant plumes which were supplied in the EAR. Provide an equipment flow diagram including all components of the remediation system. Include a detailed discussion of the following topics at a minimum, if applicable:

- a. Capital costs (Prepackaged systems should not be broken into individual components.)
- b. Individual component specifications
- c. Installation costs
- d. Excavation and disposal costs (if applicable)
- e. Operation and maintenance requirements and costs
- f. Monitoring and reporting costs

If any soil corrective action is in operation or has been completed, describe how this will affect the proposed option and show the measured effective radius of influence.

If a Soil Venting System is to be operated provide the rationale for the design and placement of the vapor extraction wells and the vacuum pump sizing.

2. GROUND WATER CORRECTIVE ACTIONS

Provide a description of the corrective action option chosen for ground water remediation. If a prepackaged, predesigned treatment system is not proposed, provide justification that the costs to design, construct, install operate and maintain the proposed system does not exceed that of a prepackaged system. Specify why this system or method is best suited for remediation at this site including the life expectancy of the

project and the calculated effective radius of influence (show calculations). A minimum of 0.5 feet drawdown at the edge of the plume is required to be considered an effective radius of influence. Provide a map showing the calculated effective radius of influence of the remediation system overlaid on maps of the horizontal and vertical contaminant plumes which were supplied in the EAR. Include a discussion concerning the number, depth and placement of recovery wells as it relates to the life expectancy of the project. Provide a flow diagram including all components of the remediation system. Disposal options for treated effluent shall be discussed. Specifically why reinjection would not be the most cost effective or technologically feasible. Include a detailed discussion of the following topics at a minimum, if applicable:

- a. Capital costs (Prepackaged systems should not be broken into individual components.)
- b. Individual component specifications
- c. Installation costs
- d. Operation and maintenance requirements
- e. Pump rates (GPM)
- f. Monitoring and reporting costs
- g. Effluent discharge options and costs

If any emergency or interim corrective actions are currently in operation (e.g. free product removal, etc.), explain how the implementation of the proposed corrective action will enhance or alter the current system. If the system is currently in operation, show the actual, measured radius of influence.

[NOTE: Proposed corrective actions must actively remediate, entirely encompass, and prevent further migration of the contaminant plume(s).]

D. PROPOSED IMPLEMENTATION SCHEDULE

Provide a detailed schedule of all events necessary to implement the proposed corrective action through system start-up. This schedule shall not exceed 60 days from the time this Division approves a CAP.

E. MONITORING and REPORTING

Based upon site specific information, propose the monitoring wells to be utilized during the site status monitoring to measure the effectiveness of the corrective action system. Also any springs, water supplies or other areas of concern shall be proposed to be monitored. All monitoring and reporting shall be performed in accordance with Technical Guidance Document - 007. A detailed cost estimate of monitoring and reporting shall be included in the Corrective Action Cost Estimate Form.

F. SIGNATURE PAGE

A signature page, as shown below, shall be attached to the Corrective Action Plan. A Geologist or Professional Geologist, as defined under T.C.A. 62-36-101, or a duly licensed Professional Engineer shall sign this document attesting to all geologic work specified in this document. A duly licensed Professional Engineer shall sign this document attesting to all corrective action design specifications. Each signee shall provide a statement of fact attesting to the portions of the report for which they were responsible.

I certify under penalty of law, including but not limited to penalties for perjury, that the information contained in the Corrective Action Plan and on any attachments, is true, accurate and complete to the best of my knowledge, information, and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Owner/Operator Name (Print)

Date

Signature

Print Name & Title
(Geologic Sections)

Date

License #

Signature

Print Name & Title
(Engineering Design Sections)

Date

License #

Signature

If a P.E. signs the report, please indicate the area of expertise.

Name

Area of expertise

Name

Area of expertise

STATE OF _____

Sworn to and subscribed before me by _____ on this date

My commission expires _____

Notary Public - Print Name

Signature

TENNESSEE UST COST ESTIMATE COVER SHEET



FACILITY INFORMATION

Facility Name _____ Facility ID# _____
 Address _____ () _____
 street city zip phone

CORRECTIVE ACTION CONTRACTOR

Name _____
 Address _____
 street city state zip
 Contact Person _____ () _____
 phone

COSTS

Submit with ISCR	Estimated Costs	Actual Costs
Site Check		
Initial Abatement / Emergency Response		
Free Product Recovery		
Initial Site Characterization		
Environmental Assessment		
Environmental Assessment Report		

Signature of Person Completing Estimate _____ Date _____

Signature of Owner/Operator _____ Date _____

Submit with EAR	Estimated Costs	Actual Costs
Environmental Assessment		
Environmental Assessment Report		
Corrective Action Plan		

Signature of Person Completing Estimate _____ Date _____

Signature of Owner/Operator _____ Date _____

Submit with CAP	Estimated Costs	Actual Costs
Corrective Action Plan		
Corrective Action		
Monitoring		
Operation & Maintenance		
Closure		

Signature of Person Completing Estimate _____ Date _____

Signature of Owner/Operator _____ Date _____

CORRECTIVE ACTION COST ESTIMATE FORM

TN UST Facility ID # -

CHECK ONE

- Soil Corrective Action
- Ground Water Corrective Action

Define Technologies

- A.
- B.
- C.

Corrective Action Implementation	Technology A	Technology B	Technology C
Project Life	Year(s)	Year(s)	Year(s)
Capital Equipment (List all equipment in excess of \$ 500)			
Shipping			
Miscellaneous parts and supplies			
Drilling			
Excavation			
Trucking			
Surveying			
Other Services			
One Comprehensive Monitoring Event			
Rentals (List Below)			
Disposal - Free Product			
Water			
Soil			
Utilities			
Permitting			
Lodging and Per Diem			
Mileage Miles X \$ /mile			
Miscellaneous (List Below)			
Installation of system: (All Labor)			
Subtotal			

Operations and Maintenance (per month)	Technology A	Technology B	Technology C
Professional Services			
Permitting			
Utilities (per month)			
Supplies			
Disposal			
Lodging and Per Diem			
Mileage Miles X \$ /mile			
Miscellaneous			
SUBTOTAL			
Subtotal of O&M (Monthly Subtotal X Project Life In Months)			

Site Monitoring (per month)	Technology A	Technology B	Technology C
Professional Services			
Analytical			
Supplies			
Disposal			
Lodging and Per Diem			
Mileage Miles X \$ /mile			
Miscellaneous			
SUBTOTAL			
Subtotal of Site Monitoring (Monthly Subtotal X Project Life In Months)			

Reporting (per month)	Technology A	Technology B	Technology C
Professional Services			
Miscellaneous			
SUBTOTAL			
Subtotal of Reporting (Monthly Subtotal X Project Life In Months)			

Site Closure (per month)	Technology A	Technology B	Technology C
Professional Services			
Supplies			
Lodging and Per Diem			
Mileage Miles X \$ /mile			
Miscellaneous			
SUBTOTAL			
Subtotal of Site Closure (Monthly Subtotal X Project Life In Months)			

GRAND TOTAL			
-------------	--	--	--

APPENDIX G

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
UNDERGROUND STORAGE TANK
TECHNICAL GUIDANCE DOCUMENTS**



STATE OF TENNESSEE
 DEPARTMENT OF ENVIRONMENT AND CONSERVATION
 DIVISION OF UNDERGROUND STORAGE TANKS
 TECHNICAL GUIDANCE DOCUMENT - 002
 EFFECTIVE DATE - AUGUST 28, 1991
 REVISED DATE - JANUARY 14, 1992
 REVISED DATE - JUNE 28, 1993

RE: PROCEDURE FOR DETERMINING THE GROUND WATER CLASSIFICATION OF A CONTAMINATED AQUIFER OR WATER SOURCE

Division Rule 1200-1-15-.01(3)(p) defines "Drinking water supply" as:

"Any aquifer or water source whose chemical characteristics meet the primary and secondary drinking water standards as defined under rule 1200-5-1 and provides a yield of at least one-half gallon per minute. This shall also include any water supply used for drinking by citizens of the state."

The procedures outlined in Section II L. of the Environmental Assessment Guidelines shall be followed when determining if the ground water at a site meets the above referenced definition.

TENNESSEE DIVISION OF WATER SUPPLY
 MAXIMUM CONTAMINANT LEVELS
 RULE 1200-5-1-.06, 12, AND 25

A. Primary Standards

1) Inorganic Chemicals	LEVEL, PPM
Arsenic	0.05
Asbestos (Fibers)	7.0
Barium	2.0
Cadmium	0.005
Chromium	0.1
Fluoride	4.0
Lead	0.05
Mercury	0.002
Nitrate (as nitrogen)	10.0
Nitrite (as nitrogen)	1.0
Total Nitrate and Nitrite (as nitrogen)	10.0
Selenium	0.05
2) Organic Chemicals	
a) Chlorinated Hydrocarbons:	
Endrin (1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4 A, 5, 6, 7, 8, 8 a-octahydro-1, 4-endo, endo-5, 8-dimethano naphthalene)	0.0002

Organic Chemicals (continued)	G-4	LEVEL, PPM
b) Alachlor		0.002
Atrazine		0.003
Carbofuran		0.04
Chlordane		0.002
Dibromodichloropropane		0.0002
2,4, Dichlorophenoxyacetic acid		0.07
Ethylene dibromide		0.00005
Heptachlor		0.0004
Heptachlor epoxide		0.0002
Lindane		0.0002
Methoxychlor		0.04
Polychlorinated biphenyls		0.0005
Toxaphene		0.003
2,4,5 Trichlorophenoxypropionic acid		0.05
Pentachlorophenol		0.001

3) Turbidity

The maximum contaminant levels for turbidity in drinking water measured at a representative entry point(s) to the distribution system, are:

- a) one (1.0) turbidity unit, as determined by a monthly average pursuant to Regulation 1200-5-1-.08.
- b) two (2.0) turbidity units based on an average for two consecutive days pursuant to Regulation 1200-5-1-.08.

4) Microbiological

The maximum contaminant levels for microbiological are applicable to both community water systems and non-community water systems.

- a) The maximum contaminant level (MCL) is based on the presence or absence of total coliforms in a sample, rather than coliform density.

The number of total coliform positive samples shall not exceed any of the following:

1. For a system which collects at least 40 samples per month, if no more than 5.0 percent of the samples collected during a month are total coliform-positive, the system is in compliance with the MCL for total coliforms.
2. For a system which collects fewer than 40 samples/month, if no more than one sample collected during a month is total coliform-positive, the system is in compliance with the MCL for total coliforms.
3. A public water system which has exceeded the MCL for total coliforms must report the violation to the State no later than the end of the next business day after it learns of the violation and notify the public in accordance with the schedule of 1200-5-1-.19(1) using the language specified in 1200-5-.19(1)(i).
4. A public water system which has failed to comply with the coliform monitoring requirements, including a sanitary survey requirement must

report the monitoring violation to the State within ten (10) days after the system discovers the violation and notify the public in accordance with 1200-5-1-.19(1).

- b) Any fecal coliform-positive repeat sample or E. coli-positive repeat sample, or any total coliform-positive repeat sample following a fecal coliform-positive or E. coli-positive routine sample constitutes a violation of the MCL for total coliforms. For purposes of the public notification requirements in [1200-5-1-.19(1)(a)3.] this is a violation that may pose an acute risk to health, and the language specified by 1200-5-1-.19(5)(j) must be used.
 - c) Fecal coliforms/*Escherichia coli* (E. coli) testing
 - 1. If any routine or repeat sample is total coliform-positive, the system must analyze that total coliform-positive culture medium to determine if fecal coliforms are present, except that the system may test for E. coli in lieu of fecal coliforms. If fecal coliforms or E. coli are present, the system must notify the State by the end of the day when the system is notified of the test results, unless the system is notified of the result after the Department office is closed, in which case the system must notify the State before the end of the next business day.
 - 2. The State has the discretion to allow a public water system, on a case-by-case basis, to forgo fecal coliform or E. coli testing on a total coliform-positive sample if that system assumes that the total coliform-positive sample is fecal coliform-positive or E. coli-positive. Accordingly, the system must notify the State as specified in paragraph (c)(1) of this section and the provisions of 1200-5-1-.06(4)(b) apply.
 - d) A public water system must determine compliance with the MCL for total coliforms in (a) and (b) of this section for each month in which it is required to monitor for total coliforms.
 - e) No variance or exemptions from the maximum contaminant level for total coliforms are permitted.
- 5) Radionuclides
- a) The following maximum contaminant levels for radium-226, radium-228, and gross alpha particle radioactivity are applicable to all community water systems:
 - 1. Combined radium-226 and radium-228: -5 pCi/l.
 - 2. Gross alpha particle activity (including radium-226 but excluding radon and uranium): -15 pCi/l.
 - b) Maximum contaminant levels for beta particles and photon radioactivity from man-made radionuclides in community water systems shall be as follows:
 - 1. The average annual concentrations of beta particle and photon radioactivity from man-made radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than four (4) millirem/year.
 - 2. Except for radionuclides listed in Table A, the concentration of man-made radionuclides causing four (4) mrem total body or organ

dose equivalents shall be calculated on the basis of a two (2) liter per day drinking water intake using the 168 hour data listed in "Maximum Permissible Body Burdens and Maximum Water for Occupational Exposure," NBS Handbook 69 as amended August 1963, U.S. Department of Commerce. If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed four (4) millirem/year.

TABLE A
Average Annual Concentrations
Assumed to Produce a Total Body
or Organ Dose of a 4 mrem/yr.

Radionuclide	Critical Organ	pCi per Liter
Tritium	Total Body	20,000
Strontium-90	Bone Marrow	8

B. Secondary Standards	Level, PPM
Chloride	250
Color (In Color Units)	15
Copper	1
MBAS (Methyl Blue Active Substance)	0.5
Iron	0.3
Manganese	0.05
Odor (In Threshold Odor Number)	3
pH	6.5-8.5
Sulfate	250
TDS (Total Dissolved Solids)	500
Zinc	5
Fluoride	2.0
Aluminum	0.2
Silver	0.1

C. Volatile Organic Chemicals	
Trichloroethylene	0.005
Carbon tetrachloride	0.005
Vinyl chloride	0.002
1,2-Dichloroethane	0.005
Benzene	0.005
1,1-Dichloroethylene	0.007
1,1,1-Trichloroethane	0.20
para-Dichlorobenzene	0.075
cis 1,2-Dichloroethylene	0.07
1,2-Dichloropropane	0.005
Ethyl benzene	0.7
Monochlorobenzene	0.1
ortho-Dichlorobenzene	0.6
Styrene	0.1
Tetrachloroethylene	0.005
Toluene	1
trans 1,2-Dichloroethylene	0.1
Xylenes (total)	10



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS

TECHNICAL GUIDANCE DOCUMENT - 004

EFFECTIVE DATE - AUGUST 29, 1991
REVISED DATE JULY 8, 1993

RE: REQUIREMENTS FOR FREE PRODUCT REMOVAL

The purpose of this document is to assist the regulated community in understanding the requirements for free product (nonaqueous phase liquid) removal defined under Rule 1200-1-15-.06(5). Situations which require free product removal are:

1. A measured thickness greater than 0.10 inches of free product in a well;
2. The presence of a sheen on a surface body of water; or
3. The presence of a sheen on the ground or within a subsurface structure.

An eligible owner or operator conducting UST corrective actions is entitled to coverage of reasonable costs from the Tennessee Petroleum Underground Storage Tank Fund, subject to rule 1200-1-15-.09(11)(a), which states:

Upon confirmation of a release in accordance with rule 1200-1-15-.05(3) or after a release from the UST system is identified in any other manner, owners and operators must perform initial response actions required in rule 1200-1-15-.06(2), initial abatement measures required in rule 1200-1-15-.06(3)(a)1. through 4. and rule 1200-1-15-.06(3)(b), and initial free product removal according to rule 1200-1-15-.06(5) and rule 1200-1-15-.06(3)(a)6. necessary to properly stabilize a site and to prevent significant continuing damage to the environment or risk to human health.

Therefore, failure to comply with the requirements of this Technical Guidance Document may result in the loss of Fund coverage.

At sites where free product removal is required, equipment capable of continuous free product removal must be installed within 48 hours, unless otherwise specified by the Division. The minimum objective for the design of the removal system is to stop the migration of free product. Where surface water is impacted, petroleum absorbent materials such as booms and pads must be installed and replaced whenever necessary. Flammable products must be handled in a safe and competent manner to prevent fires or explosion.

Unless directed to do otherwise by the Division, prepare and submit, within 45 days after confirming a release, a Free Product Removal Report in the format established by the Division.



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Underground Storage Tanks

Technical Guidance Document - 007

Effective Date -January 1, 1994

RE: Monitoring at UST Sites

The purpose of this Technical Guidance Document (TGD) is to assist the regulated community in determining the requirements for periodic monitoring and reporting at UST sites.

All work associated with this TGD shall be conducted in accordance with the applicable sections of the Environmental Assessment Guidelines.

I. Monitoring Program Components

A. Comprehensive

Comprehensive Monitoring shall consist of the following activities in sequence:

1. Water
 - a. Obtaining water level measurements from all monitoring wells;
 - b. Sampling all monitoring wells and recovery wells; and,
 - c. Sampling all springs and water supplies approved by the Division
2. Vapor monitoring of all subsurface structures (i.e. basements, utility vaults, sewers, etc.) within the contaminant plume(s). All structures which have been previously impacted by petroleum vapors, shall also be monitored.

B. Site Status

Site Status Monitoring shall consist of the following activities:

1. Water
 - a. Obtaining water level measurements from all monitoring wells;
 - b. Sampling all monitoring wells approved by the Division;

- c. Sampling all springs and water supplies approved by the Division; and,
 - d. Sampling the influent and effluent of the ground water treatment system, if applicable.
2. Vapor Monitoring of all subsurface structures (i.e. basements, utility vaults, sewers, etc.) within the contaminant plume(s). All structures which have been previously impacted by petroleum vapors, shall also be monitored.
 3. Emissions Monitoring from the soil vapor extraction system, if applicable. At a minimum, measurements of the total volatiles as measured by an organic vapor detector, O₂, and CO₂ shall be taken.

C. Soil

Soil Monitoring shall consist of the installation of one boring in the location where the highest level of soil contamination is known to exist through previous site assessment activities.

II. Monitoring Programs

A. Corrective Action

Corrective Action Monitoring shall be performed upon approval of the Corrective Action Plan by the Division, and consist of the following:

1. Comprehensive Monitoring shall be conducted prior to the start-up of the ground water corrective action system.
2. Site Status Monitoring shall be conducted semiannually (twice a year) thereafter until the ground water contaminant concentrations decrease below the applicable cleanup levels. Closure Monitoring shall commence 20 to 30 days after the Division approves the termination of the ground water corrective action system in accordance with Item C. below.
3. Soil Monitoring shall commence two years after the soil corrective action system becomes operational. It shall continue every two years until the soil contaminant concentrations decrease below the applicable cleanup levels.

B. Monitoring Only

A monitoring only program shall be implemented upon the Division's approval and consist of the following:

1. **Comprehensive Monitoring shall be conducted 20 to 30 days after the Division approves a monitoring only request.**
2. **Site Status Monitoring shall be conducted semiannually (twice a year) thereafter until:**
 - a. **Contaminant concentrations are below the applicable cleanup levels; or,**
 - b. **The Division requires additional activities.**

If the analytical results indicate contaminant concentrations have decreased below the applicable cleanup levels, Closure Monitoring shall commence the next quarter in accordance with Item C. below and upon approval of the Division.

3. **Soil Monitoring shall be performed every two years, until the soil contaminant concentrations are below the applicable cleanup levels or the Division requires additional activities.**

C. Closure

Closure Monitoring is to determine that the ground water contaminant concentrations remain below the applicable cleanup levels for one year and consist of four (4) consecutive quarters of sampling using the following procedures:

1. **Comprehensive Monitoring shall be conducted 20 to 30 days after the Division approves the start of a Closure Monitoring Program.**
2. **Site Status Monitoring shall be performed the second and third quarters.**
3. **Comprehensive Monitoring shall be conducted the fourth quarter.**

If contaminant concentrations are detected above the applicable cleanup levels during closure program, additional activities associated with corrective action shall be required.

The Division reserves the right to modify these monitoring requirements at any time.

III. Report Preparation

Within thirty (30) days after sample collection, a report shall be prepared and submitted containing the following information:

A. Progress

If any corrective action has taken place since the last report, briefly describe the progress of the corrective action system(s) to date.

1. Based upon the readings taken during routine O & M visits to the site, what is the average flow rate and the estimated total gallons of water treated for the reporting period. (Report this amount in Table 1)
2. Based upon the last analytical results obtained during the reporting period, estimate the total pounds of Benzene and TPH removed via ground water treatment during the reporting period and the total pounds removed to date. Include all calculations. (Report this amount in Table 1)
3. Provide in Table 1 the monthly O & M costs incurred at the site and the total O & M costs to date. O & M costs shall include but not be limited to the following: all personnel time on and off site, report preparation, analytical costs, equipment rental, supplies, capital equipment, repairs, utilities, fees, per diem and mileage. If modifications are made to the system, briefly explain the modifications and why they were necessary.

B. Problems

Briefly describe any problems which have been encountered with the corrective action system(s) since the previous report and the actions taken to resolve the problem. Report the percent of time the treatment system was out of operation during the reporting period due to system failure. (Report this amount in Table 1)

C. Water Monitoring

1. Potentiometric Data

- a. Provide a table, prepared in accordance with Section D.1.c. of the Environmental Assessment Report Guidelines (EARG), from the data collected during the last two monitoring periods.
- b. Provide two potentiometric maps, prepared in accordance with Section D.1.d of the EARG, from the data collected during the last two monitoring periods.

2. Analytical Data

- a. Provide a table, prepared in accordance with Section D.5 of the EARG, for the water analytical results from the last four (4) monitoring periods.

Include in an appendix the laboratory analysis sheets from the most recent sampling event.

- b. If Comprehensive Monitoring was conducted during the current monitoring period provide a plume map(s) prepared in accordance with Section D.7.a. of the EARG.

D. Vapor Monitoring Results

Describe the results of the vapor monitoring. Provide a map showing the locations of the sampling points and a table indicating the results of the sampling.

E. Emissions Monitoring Results

Describe the results obtained from the monitoring of any soil vapor extraction systems and provide a table with the results of the last four sampling events.

F. Soil Monitoring Results

Describe the results of any soil sampling if it was conducted during the reporting period. Provide a table with all soil analytical results obtained in accordance with this TGD.

G. Additional Information

Provide any additional information which was included in the approved CAP or required by the Division. If applicable, provide this additional information in tables or maps, in an appropriate format.

Signature Page

I certify under penalty of law, including but not limited to penalties for perjury, that the information contained in this report and on any attachments, is true, accurate and complete to the best of my knowledge, information, and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Owner/Operator (Print)

Signature

Date

P.E. or P.G. (Print)

Signature TN Lic./Reg. #

Date

If a P.E. signs the report, please indicate the area of expertise.

(Print or Type)

Stamp/Seal

All signatures above must be notarized.

STATE OF _____

Sworn to and subscribed before me by _____ on this date

My commission expires _____

Notary Public - Print Name

Signature

MONITORING REPORT Table 1

TN UST FACILITY ID NUMBER: _____

Reporting Period	From:	From:	From:	From:
	To:	To:	To:	To:
Avg. Flow Rate GPM				
Total Gallons Pumped Per Period				
Cumulative Total-Gallons Pumped				
% Time System Was Down				
Pounds of Benzene Removed-H ₂ O Phase				
Cumulative Pounds of Benzene Removed-H ₂ O				
Pounds of TPH Removed-H ₂ O Phase				
Cumulative Pounds of TPH Removed-H ₂ O Phase				

The Reporting Period described above shall be a six month interval.

Month						
# of Site Visits/Mo.						
O & M Costs per Month						
O&M Costs To Date						

The Reporting Period for O & M costs is monthly.

UST Monitoring Program Summary

Table 1

Monitoring Program Components	Frequency	Description
<p>Comprehensive (Water and Vapor)</p>	<p>Four (4) Times</p> <ol style="list-style-type: none"> 1. Before CA system startup (Baseline) 2. Upon system shutdown(1st qtr. of Closure Monitoring) 3. The 4th quarter of Closure Monitoring 4. Before beginning a Monitoring Only Program 	<p>Sample all monitoring wells and recovery wells. Also all springs and water supplies proposed by the CAC and approved by the Division.</p> <p>Monitor for vapors in all subsurface structures (i.e. basement, sewers, utilities) within the contaminant plume(s). Also any structure previously impacted by petroleum vapors.</p>
<p>Site Status (Water, Vapor, and Emissions)</p>	<ol style="list-style-type: none"> 1. Semiannually during the operation of the corrective action system. 2. Semiannually during Monitoring Only 3. During the 2nd and 3rd quarter of Closure Monitoring. 	<p>Sample all monitoring wells proposed by the CAC and approved by the Division.</p> <p>The influent and effluent of the treatment system.</p> <p>Monitor for vapors in all subsurface structures (i.e. basement, sewers, utilities) within the contaminant plume(s). Also any structure previously impacted by petroleum vapor</p> <p>Monitoring of the systems air effluent.</p>
<p>Soil</p>	<p>Every two years until achieving soil cleanup goals.</p>	<p>One boring in the area of highest soil contamination to monitor contaminant reduction.</p>



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS

TECHNICAL GUIDANCE DOCUMENT - 008

Effective Date - January 13, 1992
Revised Date - November 19, 1993

RE: Procedure To Obtain a Site-specific Standard For a Petroleum Underground Storage Tank Site

I. PURPOSE AND CLARIFICATION

The purpose of this Technical Guidance Document (TGD) is to provide the owner and/or operator with the minimum requirements necessary to apply for a Site-specific Standard. The development of a Site-specific Standard Request (Request) may involve significant costs. Submittal does not assure approval of the Request by the Commissioner. The owner and/or operator may petition the Commissioner to grant a Site-specific Standard if:

1. "The owner and/or operator has treated petroleum contamination at a site for an extended period of time and the treatment system for soil and/or ground water has reached asymptotic levels for contaminant removal" as stated in Rule 1200-1-15-.06(7)(e)4 (Note: "Asymptotic" is defined as a level of contaminant in the soil and/or ground water which has remained relatively constant for at least four (4) consecutive quarters.).
2. "The owner and/or operator believes that a particular site should not be subject to the cleanup requirements in Appendices 3 and 4" as stated in Rule 1200-1-15-.06(7)(e)5.

A Site-specific Standard requested in accordance with Rule 1200-1-15-.06(7)(e)5 shall be submitted only after all contaminant plumes have been defined to the applicable cleanup levels and an Environmental Assessment Report (EAR) has been prepared and submitted in accordance with the 1994 revision of the EAR Guidelines. The Request shall be submitted by the Corrective Action Plan (CAP) compliance date. If corrective actions are proposed, the CAP shall be submitted with the Request.

A risk-based assessment (study) may identify sites where conditions warrant a Site-specific Standard. The study must combine information presented in the EAR and a two step evaluation to determine if risks to human health and/or the environment exist. The two step evaluation must include:

1. Completion of Worksheet 1 comparing the released constituent concentrations and completion of Worksheet 2 comparing the requested constituent concentrations of the contaminant plume(s) to EPA established exposure-limit criteria referenced in:

U.S. EPA. May, 1989. RCRA Facility Investigation (RFI) Guidance. EPA 530/SW-89-031. OSWER Directive No. 9502.00-6D. Office of Solid Waste.

2. An exposure assessment performed as outlined in Part II of this TGD

The study may determine that corrective action is necessary. Should it be determined during the study that corrective action is necessary, the owner and/or operator shall:

1. Notify the Division within 72 hours;
2. Incur no further costs to complete a Site-specific Standard Request; and
3. Begin development of a CAP (A compliance date will be established by the Division).

Information gathered during the study shall be submitted as Section A of the CAP. Section A shall contain a detailed, itemized cost summary. Any unnecessary costs incurred to proceed with an unwarranted Request may not be reimbursed by the Petroleum Underground Storage Tank Fund.

Should the Commissioner grant a Site-specific Standard, a monitoring period shall be required. All monitoring and reporting shall be performed in accordance with TGD - 007. The Site-specific Standard may be revoked in accordance with Rule 1200-1-15-.06(7)(e)6 if it is later determined that the information supplied in the request was not accurate or there has been a change in the information supplied or in actual site conditions.

Should the Commissioner deny the properly completed Request, fail to act within ninety (90) calendar days of receipt or revoke the Site-specific Standard, the owner and/or operator may petition the Petroleum Underground Storage Tank Board for the Site-specific Standard in accordance with Rule 1200-1-15-.06(7)(e)5.

II. MINIMUM REQUIREMENTS

Subparts (i) through (v) of Rule 1200-1-15-.06(7)(e)5 require the owner and/or operator to gather specific information regarding the contaminant plume(s) and the surrounding area. The following outline is intended to provide guidance and standard procedures for conducting the risk-based study:

A. Executive Summary

Provide an Executive Summary describing the findings of the project to date. Include conclusions and interpretation of data derived from implementing the environmental

assessment and/or corrective action activities. The summary shall include the proposed site-specific cleanup levels.

B. Provide the Physical and Chemical Characteristics of Petroleum; Including Its Toxicity, Persistence, and Potential For Migration

1. Physical Characteristics

- a. The source(s) of contamination and amount released
- b. The background level of each constituent in both the soil and ground water of the area if naturally-occurring petroleum is suspected to exist upgradient of the contaminant plume(s)
- c. The media through which the release is spreading or is likely to spread, the direction, and the rate
- d. Site maps showing the contaminant plume(s) defined to the applicable cleanup levels as listed in Appendices 3 and 4 of Rule 1200-1-15
- e. The results of a Synthetic Precipitation Leach Test (SW-846, Method 1312, July 1992) if BTX soil contamination is present above applicable cleanup levels (Note: The soil sample shall be collected in the area of highest known contamination and analyzed for the ground water constituents in Worksheets 1 and 2)

2. Chemical Characteristics

- a. A comparison of the constituents by completing Worksheets 1 and 2 (Note: If the released and requested constituent concentrations are the same, only complete Worksheet 1. If the released and requested constituent concentrations are different, give the rationale for selecting the requested concentrations.)
- b. The mobility of each constituent (i.e., solubility in water, ability to move by vapors, absorption by soil, etc.)
 - i. Gasoline - Benzene, Ethylbenzene, Toluene, Xylene, Methyl tertiary Butyl Ether, Di-Isopropyl Ether, TPH - Gasoline Range Organics
 - ii. Diesel, Kerosene, Waste Oil, etc. - TPH - Diesel Range Organics / 418.1

C. Provide the Hydrogeologic Characteristics of the Petroleum Site and the Surrounding Land

1. Petroleum Site

- a. The soil permeability as required in Section E of the Environmental Assessment Guidelines (EAG)
- b. Ground water recharge area
- c. Recharge rate
- d. Hydrology (ground water flow gradient, direction, and the occurrence of main aquifers or water bearing zones)

2. Surrounding Land

- a. Ground water recharge area
- b. Recharge rate
- c. Hydrology (ground water flow gradient, direction, and the occurrence of main aquifers or water bearing zones)

D. Provide the Proximity, Quality, and Current and Future Uses of Ground Water

1. The ground water classification of the aquifer or water source (i.e. drinking water supply or non-drinking water supply) as required in the EAG
2. Any current and/or future uses of the ground water within a one-half mile radius of the petroleum site (All well and spring locations shall be indicated on an 8.5 x 11 or 11 x 17 color topographic map.)
3. The depth to each aquifer or water bearing zone encountered during the investigation

E. Perform an Exposure Assessment

1. Potential exposure routes including any future change in land use (address as appropriate to site)
 - a. Ground water
 - i. Oral

ii. Dermal

b. Surface water

i. Oral

ii. Dermal

c. Soils

i. Oral

(I) Surficial (12 feet or less)

(II) Deep (greater than 12 feet)

ii. Dermal

(I) Surficial (12 feet or less)

(II) Deep (greater than 12 feet)

d. Air

Volatilization from ground water, surface water and/or soils (i.e. potential vapors in buildings, basements, utilities, etc.)

2. Potential receptors by exposure route

a. Humans

b. Domestic species

c. Aquatic species (plants and wildlife)

d. Terrestrial species (plants and wildlife)

F. Provide the Proximity, Quality, and Current and Future Uses of Surface Waters

1. Any surface waters within a one-half mile radius and the site location indicated on a color topographic map (This map shall be on 8.5 x 11 or 11 x 17 inch paper.)
2. Any current and/or future uses of surface waters within a one-half mile radius (i.e. drinking water source, recreation, etc.)

III. REQUEST FORMAT

The Site-specific Standard Request must be assembled in the order presented in Part II of this TGD. The Request shall contain a prepared text that includes the required elements of each section, and provide explanations of the associated tables and maps. All maps and tables shall be in the section in which they are referenced, not in appendices. All maps shall be on 8.5 x 11 or 11 x 17 inch paper and

contain a north arrow, legend, scale bar, figure number and vertical scale if applicable. Each section and subsection heading must be clearly printed in the Request. A table of contents shall be provided listing the location of all sections, maps, tables and appendices.

The Request shall be concluded with:

1. A summary justifying the proposed site-specific cleanup levels based on all available information. The summary must include a discussion of the calculations in Worksheets 1 and 2, the information compiled in the exposure assessment, and all risk(s) (carcinogenic, systemic toxicant, and other) to human health or the environment; and
2. A proposal of the ground water monitoring wells to be sampled during site status monitoring if the Site-specific Standard Request is approved. Closure monitoring and reporting shall be performed in accordance with TGD - 007.

IV. SIGNATURE PAGE

A signature page, as shown below, must be attached to the Request. This page must be signed by both a Professional Engineer licensed by the State of Tennessee and a Professional Geologist registered by the State of Tennessee or a properly licensed Engineer. Each signee shall provide a notarized statement of fact attesting to the portions of the report which they were responsible.

I certify under penalty of law, including but not limited to penalties for perjury, that the information contained in the Site-specific Standard Request and on any attachments, is true, accurate and complete to the best of my knowledge, information, and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Owner/Operator - Print Name and Title

Date

Signature

STATE OF _____

Sworn to and subscribed before me by _____ on this date
_____.

My commission expires _____.

Notary Public - Print Name

Signature

Professional Engineer - Print Name

Date

License #

Signature

Professional Geologist
or properly licensed Engineer - Print Name

Date

License #

Signature

Area of expertise -
properly licensed Engineer

STATE OF _____

Sworn to and subscribed before me by _____ on this date
_____.

My commission expires _____.

Notary Public - Print Name

Signature

G-23
WORKSHEET 1

Worksheet 1 lists EPA-established exposure-limit criteria. Compare the concentrations of each released constituent to the exposure-limit criteria by:

1. Answering yes or no in the "Concentration Exceeds Criteria?" column;
2. Completing the "Ratio of Concentration to Criteria Value" column; and
3. Summing the "Ratio of Concentration to Criteria Value" column to calculate the Carcinogenic Hazard Index (CHI) and the Systemic Hazard Index (SHI). The Hazard Index is a measure of the overall health risk posed by a mixture of constituents.

The "released" concentration is the maximum concentration as indicated in the EAR or by the asymptotic level for each constituent. While some constituents may not be included in the Site-specific Standard Request, they are included in the worksheet for calculation of the Hazard Indices.

Exposure Media	Constituent Released	Conc. Request (ppm)	Criteria Value (ppm)	Conc. Exceeds Criteria? (Yes or No)	Ratio of Concentration to Criteria	
					CHI	SHI
Ground water	Benzene		0.005			
	Toluene		10			
	Ethylbenzene		4			
	Xylenes		70			
	MTBE*		0.7			

SUM		
-----	--	--

Soil (12 ft. or less)	Benzene		24			
	Toluene		20000			
	Ethylbenzene		8000			
	Xylenes		200000			
	TPH**		11287			

SUM		
-----	--	--

G-24
WORKSHEET 2

Worksheet 2 lists EPA-established exposure-limit criteria. Compare the concentrations of each released constituent to the exposure-limit criteria by:

1. Answering yes or no in the "Concentration Exceeds Criteria?" column;
2. Completing the "Ratio of Concentration to Criteria Value" column; and
3. Summing the "Ratio of Concentration to Criteria Value" column to calculate the Carcinogenic Hazard Index (CHI) and the Systemic Hazard Index (SHI). The Hazard Index is a measure of the overall health risk posed by a mixture of constituents.

The "requested" concentration is the site-specific concentration being requested. While some constituents may not be included in the Site-specific Standard Request, they are included in the worksheet for calculation of the Hazard Indices.

Exposure Media	Constituent Released	Conc. Request (ppm)	Criteria Value (ppm)	Conc. Exceeds Criteria? (Yes or No)	Ratio of Concentration to Criteria	
					CHI	SHI
Ground water	Benzene		0.005			
	Toluene		10			
	Ethylbenzene		4			
	Xylenes		70			
	MTBE*		0.7			

SUM		
-----	--	--

Soil (12 ft. or less)	Benzene	24		
	Toluene	20000		
	Ethylbenzene	8000		
	Xylenes	200000		
	TPH**	11287		

SUM		
-----	--	--



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS
TECHNICAL GUIDANCE DOCUMENT - 012
EFFECTIVE DATE: JANUARY 21, 1994

RE: GENERAL FACILITY SITE CHECK

PURPOSE

In order to satisfy Rule 1200-1-15-.05(3)(b), this investigation shall be conducted at facilities with evidence of on-site environmental impact (exclusive of analytical data) or off-site environmental impact and at which underground storage tank (UST) system(s) have passed tightness testing.

An environmental impact includes, but is not limited to, the discovery of released petroleum at a UST site or in the surrounding area (such as free product or vapors in soils, basements, sewer and utility lines and nearby surface water). (See Rule 1200-1-15-.05(1)(a)).

GENERAL INFORMATION

A geologist or professional geologist, as defined under T.C.A. 62-36-101, or a duly licensed professional engineer in the State of Tennessee, shall be retained to supervise all work specified in this document. In addition, all Fund-eligible work shall be conducted and/or overseen by an UST-approved Corrective Action Contractor.

Any of the following conditions shall warrant the installation of one ground water monitoring well at the location indicated in Procedure C below.

1. Environmental impact which includes surface water and/or groundwater
2. Borings which encounter ground water
3. Tank(s) and/or supply line(s) installed at or below the soil/bedrock interface

If free product is encountered, an acceptable method of free product removal shall be installed.

All site check activities shall be conducted in accordance with the Environmental Assessment Guidelines (Section 3 of the UST Reference Handbook).

The Division reserves the right to modify these guidelines if deemed necessary.

PROCEDURES

In order to satisfy Rule 1200-1-15-.05(3)(b), the following procedures shall be completed:

A. Sampling Due to Single Point Environmental Impact

If a single point of environmental impact is observed, then the following procedures will apply:

1. Two (2) imaginary lines (Lines A and B) shall be constructed from the point at which the environmental impact was discovered to the edges of the UST system, as shown in Diagrams 1 and 2. The angle formed by these two lines shall then be bisected by a third imaginary line (Line C). A fourth line (Line D) shall be placed perpendicular to Line C, in the area between the UST system and the point of environmental impact, at a distance of 10 to 15 feet from the nearest portion of the UST system. All borings are to be located along Line D.

2. All borings shall be placed as follows:

The first boring shall be advanced at the intersection of Line C and Line D. Additional borings shall be located on Line D at points fifteen (15) feet to each side of the initial boring. Each additional pair of borings shall be located on Line D at points fifteen (15) feet from the previous pair. Borings may continue outward along Line D in this manner until Lines A and B are encountered. If more than seven (7) borings will be required to meet these guidelines, the Division shall be contacted for prior approval.

3. If, at any point during this subsurface investigation, one of the following conditions is encountered, then the site check may be terminated.

- a) Presence of free product
- b) Elevated OVD readings at water table

Sample(s) with the highest level of contamination shall be submitted for laboratory analyses.

B. Sampling Due to Multiple Points of Environmental Impact

If multiple points of environmental impact are observed (e.g. sewer and utility lines and/or surface water), then the following procedures will apply:

1. Two (2) imaginary lines (Lines A and B) shall be constructed from the points at which environmental impact was discovered to the edges of the UST system, as shown in Diagram 3. The angle formed by these two lines shall then be bisected by a third imaginary line (Line C). A fourth line (Line D) shall be

placed perpendicular to Line C, in the area between the UST system and the points of environmental impact, at a distance of 10 to 15 feet from the nearest portion of the UST system. All borings are to be located along Line D.

2. All borings shall be placed as follows:

The first boring shall be advanced at the intersection of Line C and Line D. Additional borings shall be located on Line D at points fifteen (15) feet to each side of the initial boring. Each additional pair of borings shall be located on Line D at points fifteen (15) feet from the previous pair. Borings may continue outward along Line D in this manner until Lines A and B are encountered. If more than seven (7) borings are required to meet these guidelines, the Division shall be contacted for prior approval.

3. If, at any point during this subsurface investigation, one of the following conditions is encountered, then the site check may be terminated.
 - a) Presence of free product
 - b) Elevated OVD readings at water table

Sample(s) with the highest level of contamination shall be submitted for laboratory analyses.

C. Ground Water Monitoring Well

1. If warranted, one ground water monitoring well shall be installed on Line C at a point midway between the UST system and the point where an environmental impact was observed. If the midpoint is not located on the site, then the well shall be installed at the intersection of Line C and the property boundary.
2. In the case of multiple impact points, the well shall be installed at the midpoint of an imaginary line from the UST system to the point of the most significant impact. If the midpoint is not located on the site, then the well shall be installed at the intersection of the line and the property boundary.

Diagram 1

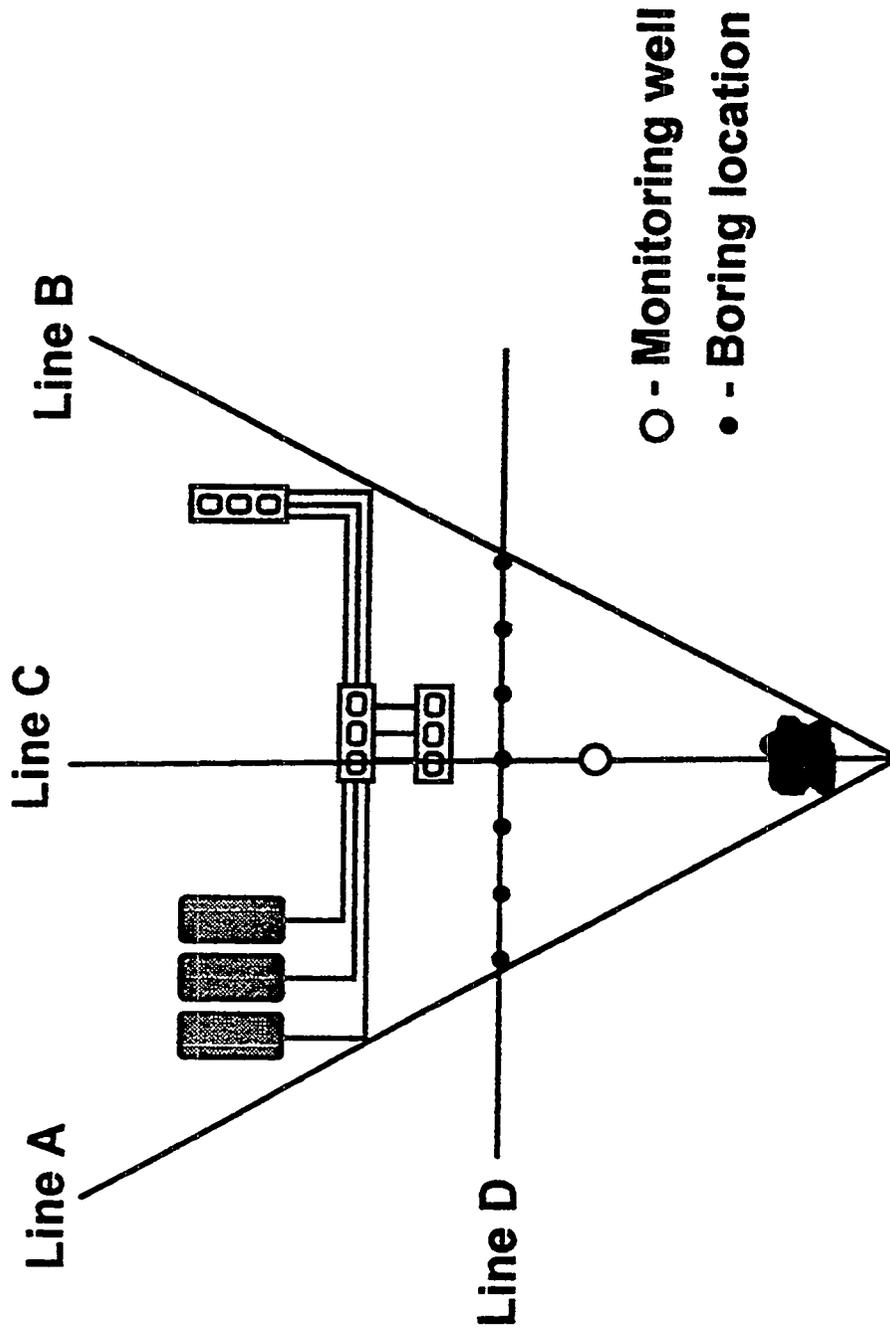
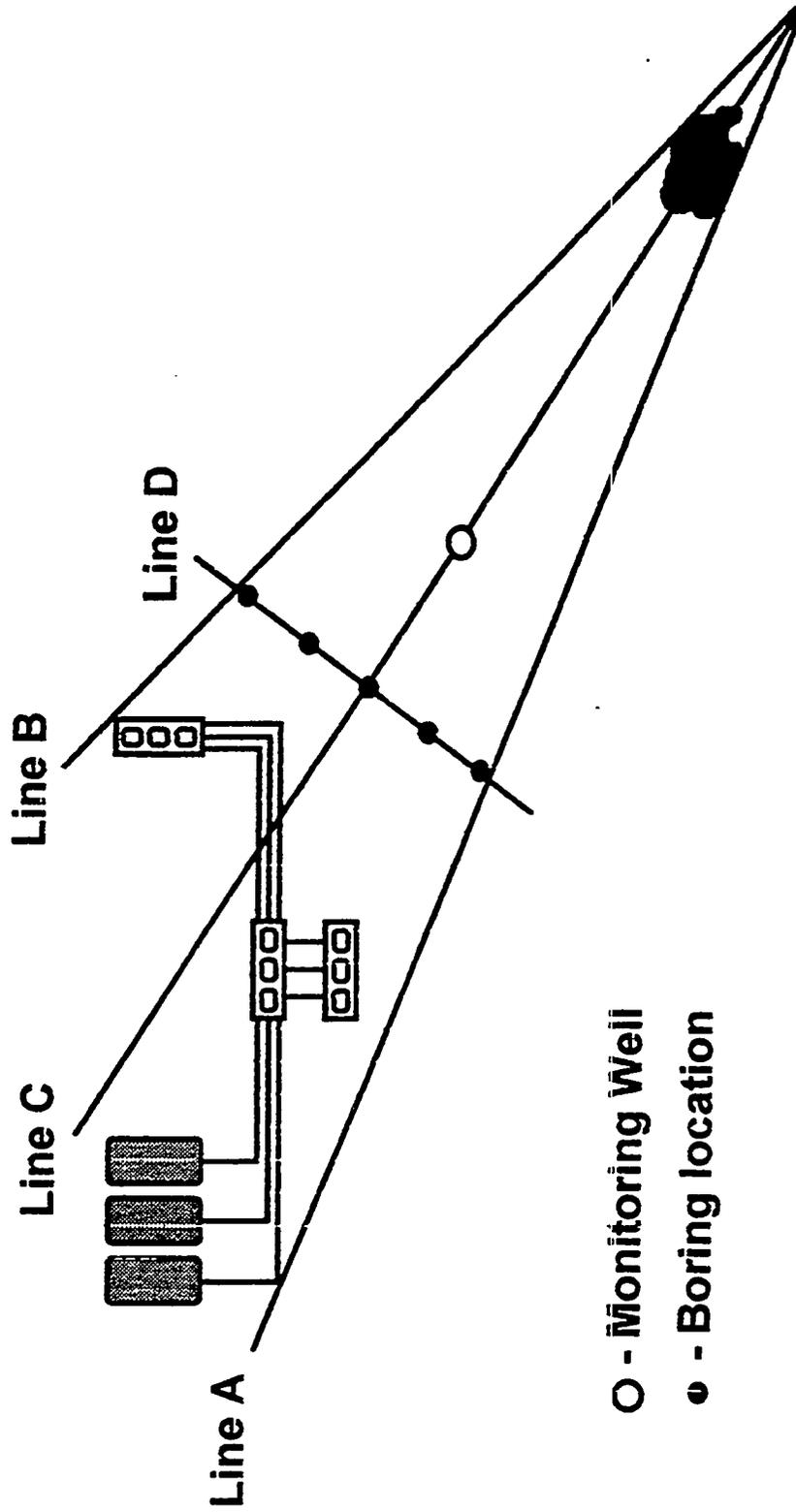
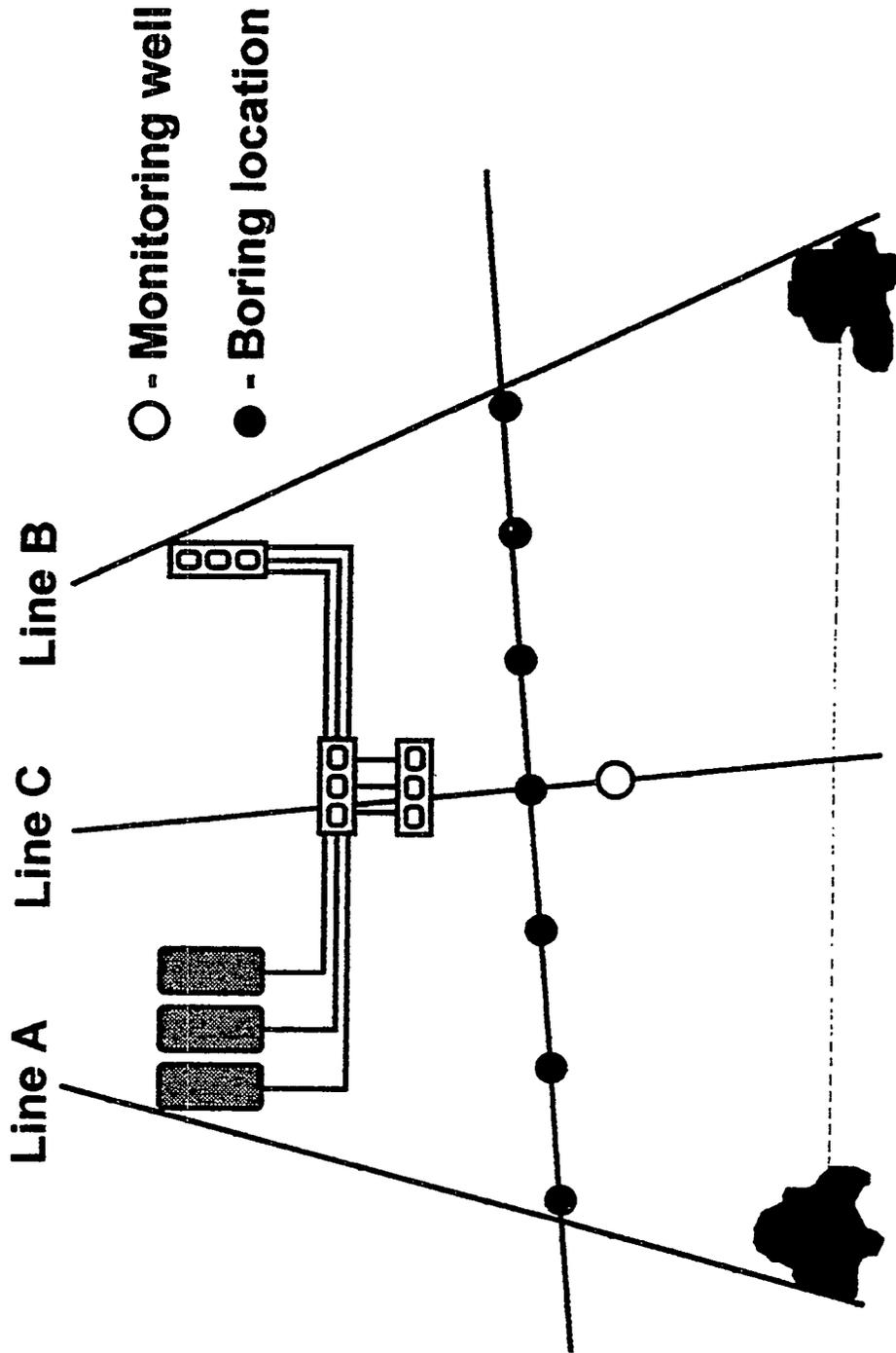


Diagram 2



○ - Monitoring Well
● - Boring location

Diagram 3





STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS
TECHNICAL GUIDANCE DOCUMENT - 014
EFFECTIVE DATE: JANUARY 19, 1994

RE: UST SITE RANKING SYSTEM

PURPOSE

The purpose of this Technical Guidance Document is to determine the numerical ranking for Underground Storage Tank Sites.

If any of the following conditions exist or have existed, then site ranking shall not be applicable and the owner/operator shall proceed with the full environmental assessment and the submittal of the Environmental Assessment Report (EAR) and Corrective Action Plan (CAP) and/or a Site Specific Standard (SSS).

1. Vapor and/or explosion hazards
2. The aquifer or water source is classified as a "drink water supply"

If the numerical ranking is less than the Action Number, the owner/operator has the following options:

1. Submit the findings of the first four (4) soil borings and monitoring wells in an EAR and begin a monitoring only program with no active remediation being performed. This option shall require monitoring until contaminant concentrations are below the applicable cleanup levels. If during the monitoring period, the Action Number is exceeded or one of the two conditions above are discovered, then additional assessment, if necessary, and corrective action will be required.
2. Complete the full environmental assessment and submit the findings in an EAR.

The option selected shall be addressed in the Executive Summary of the Environmental Assessment Report. Regardless of the Action Number for the site, the Division may require the full environmental assessment to be performed and the submittal of the EAR and CAP and/or SSS.

If free product is present, it shall be completely recovered regardless of the site ranking.

For sites scoring greater than the Action Number, the owner/operator shall complete the full environmental assessment.

Instructions for completing the Site Ranking

After installing the first four soil borings/monitoring wells and obtaining the analytical results, the attached Site Ranking Form shall be completed from the data generated.

Geologic and Hydrogeologic Factors:

1. Minimum depth to water table

The distance between the surface and the water table shall be determined from the four (4) monitoring wells. The minimum distance shall be used to determine the score in this category.

2. Minimum distance between the water table and contaminated soil

The distance between the soil with concentrations above the applicable cleanup levels and the water table shall be determined. The minimum distance shall be used to determine the score in this category.

3. Soil permeability

The soil permeability shall be determined as described in the Environmental Assessment Guidelines. The maximum permeability shall be used to determine the score in this category.

4. Calculated ground water flow rate

The ground water flow rate shall be calculated and the maximum value shall be used to determine the score for this category. Regardless of the calculated ground water flow rate, if karst conditions exist in the area of the site, 30 points shall apply for this category.

Receptor Factors:

For categories 5 through 8 the following applies:

All sampling locations where analytical results document contamination above any applicable cleanup level shall be identified as known contamination. These sampling locations include soil borings/monitoring wells, soil or water from tank pits, soil or water from line trenches, etc.

To determine the score for each of these categories, the first step is to determine if any of the receptors (i.e. basement, sanitary sewer, etc.) are within a 50 foot radius of known contamination. If a receptor exists within this area, the highest score shall apply and no additional investigation is warranted to determine the score for each category. If a receptor does not exist within 50 feet of the known contamination, the investigation shall continue in each additional area (50 to 100 foot radius, etc.) until a receptor is identified or it has been determined that a receptor does not exist within 300 feet of known contamination.

For categories 9 through 11 the following applies:

To determine the score for each category, the first step is to determine if a water source is within a 0.1 mile radius of Monitoring Well 4 (MW-4) as defined in the Environmental Assessment Guidelines. If a water source is within this area, the highest score shall apply and no additional investigation is warranted to determine the score for each category. If a water source does not exist within 0.1 miles of MW-4, the investigation shall continue in each additional area (0.1 to 0.25 mile radius, etc.) until a water source is identified or it has been determined that a water source does not exist within 0.5 miles of MW-4.

Special note for Category 11 - If surface water has been visibly impacted by a petroleum product (i.e. sheen, iron flocculate, etc.) 200 points shall be applied to that category.

Contamination Factors:

12. Contaminant Concentration

- A. Determine the maximum concentrations from any sampling point of the following:
 1. Benzene and TPH in ground water
 2. BTX and TPH in soil
- B. Determine the applicable cleanup levels in accordance with the Environmental Assessment Guidelines.
- C. Divide the maximum concentrations (A) by the applicable cleanup levels (B) to obtain the Contaminant Concentration Ratio (C).

For Categories 13 through 16 the following applies:

Use the Contaminant Concentration Ratios as computed in Category 12 to determine the score in each category. All numbers shall be rounded up to the next whole number.

17. Total Site Score

Sum the scores for Categories 1 through 16 to determine the Total Site Score.

Signature Page

The following signature page shall be attached to the Site Ranking Form *ONLY IF* it is not submitted with the Environmental Assessment Report.

I certify under penalty of law, including but not limited to penalties for perjury, that the information contained in this report and on any attachments, is true, accurate and complete to the best of my knowledge, information, and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Owner/Operator (Print)

Signature

Date

P.E. or P.G. (Print)

Signature TN Lic./Reg. #

Date

If a P.E. signs the report, please indicate the area of expertise.

(Print or Type)

Stamp/Seal

All signatures above must be notarized.

UST SITE RANKING FORM

Facility ID Number: ___ - _____

Facility Name:

Facility Address:

Geologic and Hydrogeologic Factors

1	Minimum depth to the water table		
	< 5.0 Feet		50
	5.1 to 10.0 Feet		45
	10.1 to 15.0 Feet		40
	15.1 to 30.0 Feet		35
	30.1 to 50.0 Feet		25
	50.1 to 75.0 Feet		15
	75.1 to 100.0 Feet		10
	> 100.0 Feet		5
		Score	
2	Minimum distance between water table and contaminated soil		
	< 5.0 Feet		50
	5.1 to 10.0 Feet		45
	10.1 to 15.0 Feet		40
	15.1 to 30.0 Feet		35
	30.1 to 50.0 Feet		25
	50.1 to 75.0 Feet		15
	75.1 to 100.0 Feet		10
	> 100.0 Feet		5
		Score	
3	Soil Permeability		
	> 10^{-4} cm/sec		30
	10^{-4} to 10^{-6} cm/sec		20
	< 10^{-6} cm/sec		10
		Score	
4	Calculated Ground Water Flow Rate		
	< 10 feet/day		3
	10 to 40 feet/day		6
	40 to 90 feet/day		12
	90 to 130 feet/day		18
	130 to 260 feet/day		24
	> 260 feet/day		30
	Karst		30
		Score	

Receptor Factors

G-36

5	Basements	
	< 50.0 feet from known contamination	150
	50.1 to 100.0 feet from known contamination	75
	100.1 to 200.0 feet from known contamination	50
	200.1 to 300.0 feet from known contamination	25
	> 300.1 feet	0
	Score	

6	Sanitary sewers	
	< 50.0 feet from known contamination	75
	50.1 to 100.0 feet from known contamination	40
	100.1 to 200.0 feet from known contamination	20
	200.1 to 300.0 feet from known contamination	10
	> 300.1 feet	0
	Score	

7	Storm water sewers	
	< 50.0 feet from known contamination	50
	50.1 to 100.0 feet from known contamination	30
	100.1 to 200.0 feet from known contamination	10
	200.1 to 300.0 feet from known contamination	5
	> 300.1 feet	0
	Score	

8	Other subsurface utilities	
	< 50.0 feet from known contamination	30
	50.1 to 100.0 feet from known contamination	20
	100.1 to 200.0 feet from known contamination	10
	200.1 to 300.0 feet from known contamination	5
	> 300.1 feet	0
	Score	

9	Public water supply source	
	< .1 miles	300
	.1 to .25 miles	200
	.25 to .5 miles	100
	> .51 miles	0
	Score	

10	Private water supply source	
	< .1 miles	200
	.1 to .25 miles	150
	.25 to .5 miles	100
	> .51 miles	0
	Score	

11	Distance to surface water		
	<.1 miles		25
	.1 to .25 miles		15
	.25 to .5 miles		5
	> .51 miles		0
	Visibly impacted surface water from a petroleum product		200
		Score	

Contaminant Factors

	A. Max. Contam. Levels	B. App. Cleanup Levels	C. Cont. Conc. Ratio A/B
12	Contaminant Concentration		
	Benzene in ground water		
	TPH in ground water		
	BTX in soil		
	TPH in soil		

13	Benzene in ground water		
	<1.0		0
	1.1 to 10.0		25
	10.1 to 50.0		50
	50.1 to 100.0		100
	100.1 to 500.0		200
	>500.1		300
		Score	

14	TPH in ground water		
	<1.0		0
	1.1 to 10.0		20
	10.1 to 50.0		40
	50.1 to 100.0		80
	100.1 to 500.0		120
	>500.1		200
		Score	

15	BTX in soil		
	<1.0		0
	1.1 to 5.0		25
	5.1 to 10.0		50
	10.1 to 50.0		100
	>50.1		200
		Score	

16	TPH in soil		
	<1.0		0
	1.1 to 5.0		20
	5.1 to 10.0		40
	10.1 to 50.0		80
	>50.1		100
		Score	

17	Total site score		
----	------------------	--	--

APPENDIX H

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
UNDERGROUND STORAGE TANK
CLOSURE ASSESSMENT GUIDELINES**

**TENNESSEE DEPARTMENT OF
ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND
STORAGE TANKS**



**CLOSURE
ASSESSMENT
GUIDELINES**

JANUARY 1994

Dear Underground Storage Tank Owner:

In accordance with rule 1200-1-15-.07(2)(a) of the Tennessee Petroleum Underground Storage Tank Regulations, owners shall notify the Tennessee Division of Underground Storage Tanks of their intent to permanently close an underground storage tank (UST) system. A closure assessment shall be conducted to determine if a release from the UST system has occurred. According to rule 1200-1-15-.01(3)(ccc):

UST system or Tank system means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.

The enclosed application shall be completed and submitted for approval to the appropriate field office thirty days before initiating any closure activities. Once approved the application is valid for twelve months from the date of approval. The approved application is non-transferable. If ownership of the UST system changes, a new application shall be submitted for approval. The following enclosures are for your use and information during closure of the UST system:

UST System Closure Assessment Guidelines

Procedure for UST System Closure-in-Place

Application for Permanent Closure of Underground Storage Tank Systems

Approved Laboratory List

Approved Corrective Action Contractor List

Field Office Location Map

Notification Form

When an UST system is removed or closed-in-place, a Notification Form must be submitted to the Division at the Nashville Central Office within thirty days of the closure. The form shall indicate the current status of the UST system at the facility. Be sure to include the Facility I.D. Number and mark "C. CLOSED" to insure accurate processing. If a Notification Form reporting the closure of the tank system is not submitted, you will continue to be billed for the annual tank fee. This form must be submitted to the address located on the notification form.

If there are questions concerning the UST system closure procedures, refer to the enclosed map to contact the appropriate field office.

Enclosures

DISCLAIMER

This document has been prepared in an effort to provide guidance and standardized procedures for conducting Underground Storage Tank System Closure Assessments in accordance with Rule 1200-1-15-.07. These guidelines shall be followed unless prohibited by site-specific conditions or other applicable statutes, rules or regulations. If a variance is necessary, approval shall be obtained from Division personnel in the appropriate Division of Underground Storage Tanks field office.

It is understood that the procedures outlined in this document cannot cover every eventuality; however, these guidelines shall be used in all cases where appropriate. If SITE-SPECIFIC CONDITIONS warrant variations from these guidelines, Division personnel in the appropriate field office shall be informed and permission shall be obtained prior to the implementation of these variations. All variations from these guidelines shall be noted in the Permanent Closure Report.

STATE OF TENNESSEE
DIVISION OF UNDERGROUND STORAGE TANKS
UST SYSTEM CLOSURE ASSESSMENT GUIDELINES

The Division of Underground Storage Tanks requires that sample collection follow the protocol described in the UST System Closure Assessment Guidelines. Rule 1200-1-15-.07(3)(a) of the Tennessee Petroleum Underground Storage Tank regulations requires that samples be collected where contamination is most likely to be present at the UST site. According to rule 1200-1-15-.07(3)(a):

The requirements of this paragraph are satisfied if one of the external release detection methods allowed in rule 1200-1-15-.04(3)(e) and (f) is operating in accordance with the requirements in rule 1200-1-15-.04(3) at the time of closure, and indicates no release has occurred.

If closure of the UST system in accordance with rule 1200-1-15-.07(3)(a) is applicable, contact the appropriate Division of Underground Storage Tanks field office for further instructions.

In accordance with the Petroleum Contamination Cleanup Levels in Appendix 3 and 4 of the regulations, any material (soil, sand, or rock) with concentrations exceeding 10 parts per million total Benzene, Toluene, and Xylenes (BTX) and/or 100 parts per million Total Petroleum Hydrocarbons (TPH) is considered to be contaminated by a petroleum product. Ground water is contaminated if concentrations exceed 0.005 parts per million Benzene and 0.1 parts per million Total Petroleum Hydrocarbons. A release from the UST system requiring a response in accordance with rule 1200-1-15-.06 has occurred if laboratory results indicate contamination above these cleanup levels.

According to rule 1200-1-15-.01(3)(ccc):

UST system or Tank system means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.

BEFORE BEGINNING ANY WORK

Notify the local fire department or State Fire Marshal's office and inform them of the removal time and place. Some local fire departments may have requirements that must also be followed.

Contact a laboratory approved by the Division. A list of approved laboratories is enclosed. Make arrangements to obtain the appropriate sample bottles for the collection and analysis of total BTX and/or TPH. Instructions for collecting and preserving the samples should be provided by the laboratory. The UST system owner is responsible for obtaining the appropriate sample containers and proper handling of all samples.

Total BTX analysis is applicable for soil and/or ground water samples collected where the UST system has stored gasoline. The laboratory shall use SW-846, Test Methods for Evaluating Solid Waste. The levels of BTX shall be reported individually as Benzene, Toluene, and Total Xylenes.

A review of the type of petroleum product stored shall determine the method used for TPH analysis of soil and/or ground water. The Gasoline Range Organics (GRO) method is used if only gasoline, or other low boiling point petroleum hydrocarbons, is stored. The Diesel Range Organics (DRO) method is used if only diesel fuel, kerosene or other high boiling point petroleum hydrocarbons, is stored. Both GRO and DRO methods shall be used if both gasoline and diesel range fuels are stored in the same tankhold. If samples are analyzed using both GRO and DRO, the results of each analysis shall be summed (GRO + DRO) and reported as Total Petroleum Hydrocarbons (GRO + DRO = TPH). Neither GRO nor DRO method is applicable for analyzing samples collected where only waste oil is stored. These samples shall be analyzed using either Standard Methods of Analysis Method 503E or Methods of Analysis of Water and Wastes Method 418.1. All three methods (GRO, DRO and a waste oil analysis method) shall be used to analyze samples collected where gasoline, diesel range fuels and waste oil are stored in the same tankhold or if the storage history is unknown.

If the type of product stored is unknown, all samples shall be analyzed using BTX, TPH-GRO, TPH-DRO, and a waste oil method.

Contact the appropriate field office at least one working day prior to implementing any closure activities and/or sampling events.

Soil samples shall be collected after the UST system has been removed to ensure proper inspection of the excavated area. Composite samples are not acceptable. Areas of obvious contamination shall be overexcavated prior to sampling. If more than 100 cubic yards of material is overexcavated, contact Division personnel in the appropriate field office for further instructions. After the overexcavation of 100 cubic yards of material and/or the installation of monitoring wells, the following shall apply:

excludes backfill

An UST approved Corrective Action Contractor shall conduct and oversee all work associated with the investigation and remediation of a release from the UST system if a site is fund eligible and reimbursement will be requested from the Tennessee Petroleum Underground Storage Tank Fund.

For UST system Closure- in-place, refer to Section II below.

I. UST SYSTEM REMOVAL

The removal of an UST system shall follow the procedures outlined in Appendix 5 in the regulations.

A. SAMPLING TANK EXCAVATIONS

1. Soil samples shall be collected after all backfill material is removed from the excavation. Areas of obvious contamination shall be overexcavated prior to sampling. Samples shall be obtained from the pit floor at a depth of one foot into native soil. Refer to Table 1 to determine the sample number and location.
2. All soil samples for laboratory analysis shall be obtained from a depth of one foot into undisturbed native soil. A decontaminated hand auger, scoop, or other sampling device shall be used to collect a fresh unvolatilized soil sample. Clean, disposable, latex gloves shall be worn during the collection of each sample. The sample shall be immediately packed tightly into a sample jar leaving no voids, labeled and stored at 4°C until delivered to a Division approved laboratory.
3. Water encountered in tank excavations shall be removed and properly disposed. If the water recharges within 24 hours, a sample shall be collected and submitted to the laboratory. Water samples shall be analyzed for the appropriate petroleum constituents.

TABLE 1

TOTAL TANK STORAGE CAPACITY (GAL.) PER PIT	MIN. NO. OF SAMPLES TO SUBMIT TO LAB	LOCATION
1120 OR LESS	2	SEE FIGURE 1
1121 TO 15,000	4	SEE FIGURE 1
15,001 TO 30,000	5	SEE FIGURE 1
30,001 TO 45,000	6	SEE FIGURE 1
45,001 TO 60,000	7	SEE FIGURE 1
GREATER THAN 60,000	APPROVED ON A SITE-SPECIFIC BASIS	

B. ENCOUNTERING BEDROCK

1. If the UST system is installed in bedrock, samples of material up to the size of pea gravel can be collected and submitted for laboratory analysis. Samples shall be obtained from the pit floor. If all the backfill material has been excavated and no material can be sampled, a ground water monitoring well shall be installed. The monitoring well shall be installed immediately adjacent to the area of suspected contamination. If no obvious area of contamination is evident, the monitoring well shall be installed immediately adjacent to the tank pit at the junction of the piping trench. Refer to the Environmental Assessment Guidelines, Section II.D., in the *UST Reference Handbook* for monitoring well installation.
2. If soil contamination above the most stringent cleanup levels is in contact with bedrock, a ground water monitoring well shall be installed and sampled. The monitoring well shall be installed immediately adjacent to the area of suspected contamination in the apparent downgradient direction.
3. A monitoring well construction diagram, detailed boring log (refer to TGD-006), analytical results and a scaled site map shall be submitted to the appropriate UST field office along with the Permanent Closure Report. The site map shall indicate the location of the monitoring well in relation to the entire UST system.
4. Water encountered shall be removed and properly disposed. If the water recharges within 24 hours, a sample shall be collected and submitted to the laboratory. Water samples shall be analyzed for the appropriate petroleum constituents.

II. UST SYSTEM CLOSURE-IN-PLACE

- A. Closing an UST system in-place requires utilizing soil boring or direct push tools capable of collecting soil samples. Split-spoon samplers, hand augers, or shelby tubes shall be used to retrieve the samples from the required depth. Sampling of hollow-stem auger cuttings is unacceptable for laboratory analysis.
- B. All soil samples for laboratory analysis shall be obtained from a depth of one to four feet below the bottom of the tank. A decontaminated sampling device shall be used to collect a fresh unvolatilized soil sample. Clean, disposable, latex gloves shall be worn during the collection of each sample. The sample shall be immediately packed tightly into a sample jar leaving no voids, labeled and stored at 4°C until delivered to a Division approved laboratory. Refer to Table 2 to determine the sample number and location.
- C. If bedrock or water is encountered before completing the requirements described above in II.B., a ground water monitoring well shall be installed. The monitoring well shall be installed immediately adjacent to the tank pit at the junction of the piping trench. Refer to the Environmental Assessment Guidelines, Section II.D., in the *UST Reference Handbook* for monitoring well installation.
- D. If soil contamination is above the most stringent cleanup levels, at least one of the following requirements shall be met:
 1. Refer to Technical Guidance Document-011 to determine the applicable soil cleanup levels;
 2. Remove the UST system and overexcavate areas of obvious soil contamination; or
 3. Refer to the Environmental Assessment Guidelines in the *UST Reference Handbook*.
- E. Once the soil and/or ground water has been determined to be within the applicable cleanup levels in accordance with Appendix 3 and 4 in the regulations, refer to the document Procedures For UST System Closure-In-Place.

H-9
TABLE 2

TOTAL TANK STORAGE CAPACITY (GAL.) PER PIT	MIN. NO. OF SAMPLES TO SUBMIT TO LAB	LOCATION
1120 OR LESS	2	SEE FIGURE 2
1121 TO 15,000	4	SEE FIGURE 2
15,001 TO 30,000	6	SEE FIGURE 2
30,001 TO 45,000	8	SEE FIGURE 2
45,001 TO 60,000	10	SEE FIGURE 2
GREATER THAN 60,000	<i>APPROVED ON A SITE-SPECIFIC BASIS</i>	

III. GENERAL REQUIREMENTS DURING ALL UST SYSTEM CLOSURES

- A. Immediately after collection all samples shall be placed on ice and maintained at 4°C until delivered to a Division approved laboratory.
- B. The original or a carbon copy of all analytical results shall be submitted to the appropriate UST field office. Photocopies are not acceptable. The facility name, UST Facility I.D. number, sample location and sample depth from ground surface shall be provided to the laboratory and printed on each laboratory analysis sheet.
- C. All excavated material remaining on the site of generation or on a site owned by the generator or subsidiary of the generator shall be placed on and covered with plastic until sampled or managed in accordance with Technical Guidance Document-005. Sampling the excavated material can be done at the time of removal or after proper treatment of the contaminated material.
- D. If petroleum contaminated material is managed in accordance with Technical Guidance Document-009, an Application to Treat Petroleum Contaminated Soil shall be completed and submitted to the appropriate field office for approval. If the contaminated material is to be treated on a site owned by a third party, contact the Tennessee Division of Solid Waste Management.
- E. Technical Guidance Document-011 shall only be used to determine applicable soil clean-up levels. Technical Guidance Document-011 cannot be used to determine applicable ground water cleanup levels.
- F. The Tennessee Petroleum Underground Storage Tank Regulations require the Division be notified within 72 hours of the discovery of free product or petroleum contamination while closing an UST system. Failure to notify the Division could jeopardize fund coverage of corrective action costs associated with this release for fund eligible owners and/or operators.
- G. All appropriate closure records shall be maintained for at least 3 years.

STATE OF TENNESSEE
DIVISION OF UNDERGROUND STORAGE TANKS
PROCEDURE FOR UST SYSTEM CLOSURE-IN-PLACE

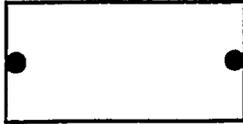
Some cities in Tennessee may have local ordinances regarding the closure-in-place of underground storage tank (UST) systems. Local ordinances that are more stringent shall always be followed. Otherwise, the outlined closure-in-place procedure shall be followed.

- I. A subsurface environmental assessment shall be conducted to determine if a release from the UST system has occurred. The assessment shall follow the Procedures For Closure-In-Place outlined in the UST System Closure Assessment Guidelines. If petroleum contamination is encountered, contact Division personnel in the appropriate field office for further instructions.
- II. If petroleum contamination is not encountered, follow the procedure as outlined below.
 - A. Remove all product from the piping.
 - B. Remove all product from the tank using a hand pump if necessary. The material removed shall be handled properly.
 - C. Remove and properly dispose all sludge from the bottom of the tank.
 - D. Remove the fill (drop) tube. Disconnect all associated piping. Cap or plug all piping not used during purging procedures. The vent line shall remain connected until the tank is filled with an inert solid material.
 - E. The tank atmosphere shall be purged and regularly tested in accordance with the provisions in Appendix 5 (2) and (3) of the regulations.
 - F. Fill the tank with an inert solid material as indicated below.
 1. Sand: Dry sand can be added to the tank as long as it flows freely. Once the tank is nearly full, a sand/water slurry shall be used to completely fill the tank.
 2. Sand/Soil: The tank shall be filled to 80% of its capacity with sand. A free flowing mixture of sand/soil shall then be added into the tank until the fill pipe is overflowing.
 3. Concrete: Concrete can be used to fill a tank if the slurry is free flowing. Add until the fill pipe is overflowing.
 4. Concrete/Bentonite: A concrete/bentonite slurry may be used to fill the tank. Add the slurry until the fill pipe is overflowing.
 5. Other inert solid material approved by Division personnel in the appropriate field office.
 - G. Disconnect and cap the vent line.
 - H. A permanent record of the UST system location, date of closure, and method used to close the UST system in-place shall be maintained.
 - I. When properties are sold or transferred, the new owners or new lease holders shall be informed of the presence of UST systems that are closed-in-place.

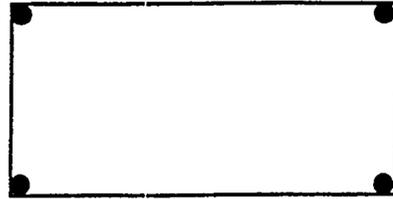
FIGURE 1

SAMPLE LOCATIONS FOR UST REMOVAL

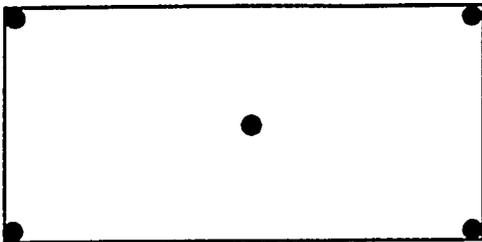
1,120 gal. or LESS



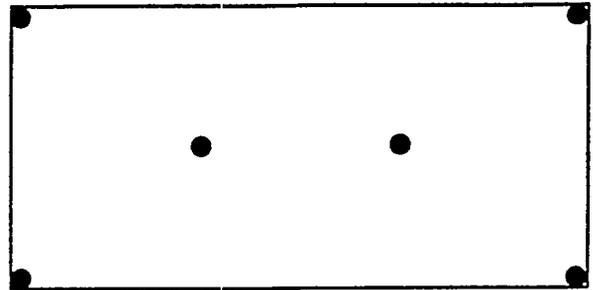
1,121 to 15,000 gal.



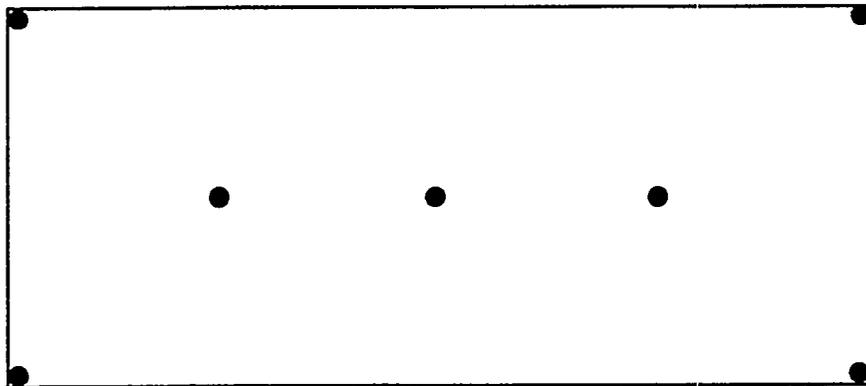
15,001 to 30,000 gal.



30,001 to 45,000 gal.



45,001 to 60,000 gal.



● - Sampling point

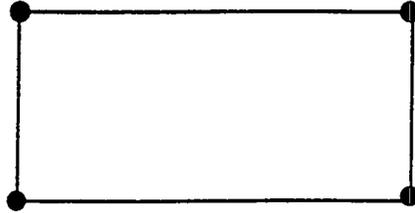
FIGURE 2

SAMPLE LOCATIONS FOR UST CLOSURE - IN - PLACE

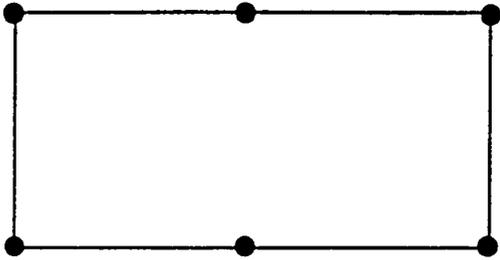
1,120 gal. or LESS



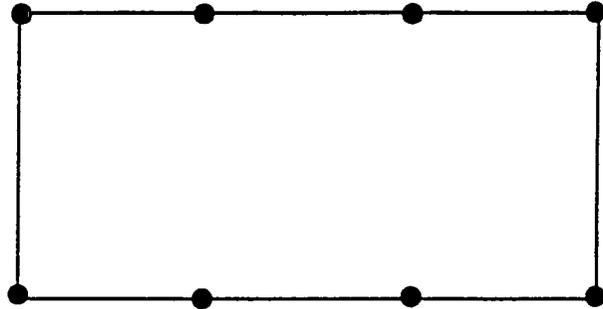
1,121 to 15,000 gal.



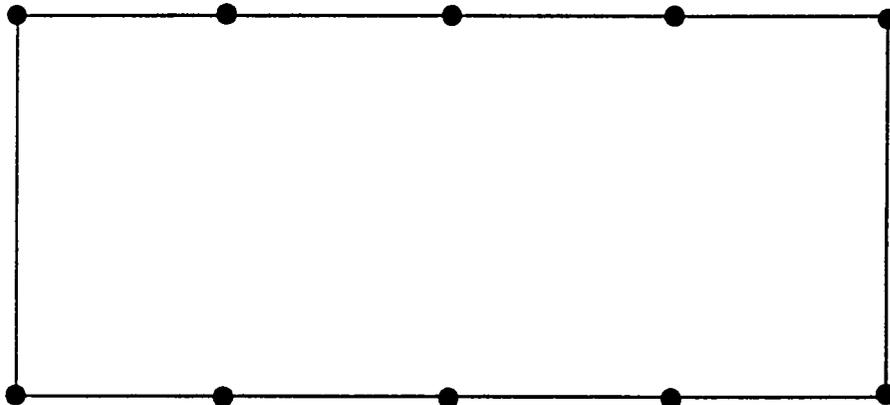
15,001 to 30,000 gal.



30,001 to 45,000 gal.



45,001 to 60,000 gal.



● - Sampling point

9. Soil and/or groundwater samples shall be collected. Laboratory analyses are based on the type of product stored. If the type of product stored is unknown, all samples shall be analyzed using BTX, TPH-GRO, TPH-DRO, and a waste oil method. Mark all the following that apply:

GASOLINE TANKS: (Boiling Point Range 70-180° F)

Benzene, Toluene, Xylene (BTX) AND
Total Petroleum Hydrocarbons-Gasoline Range Organics (TPH-GRO) _____

DIESEL OR KEROSENE TANKS: (Boiling Point Range 180-450° F)

Total Petroleum Hydrocarbons-Diesel Range Organics (TPH-DRO) _____

WASTE OIL TANKS: (Boiling Point Range greater than 450° F)

418.1 OR 503E _____

CHEMICAL TANKS:

Contact David Arial with the Environmental Protection Agency in Atlanta at (404) 347-3866.

10. All excavated material remaining on the site of generation or on a site owned by the generator or subsidiary of the generator shall be placed on and covered with plastic until sampled or managed in accordance with Technical Guidance Document-005. Sampling the excavated material can be done at the time of removal or after proper treatment of the contaminated material.

If petroleum contaminated material is managed in accordance with Technical Guidance Document-009, an Application to Treat Petroleum Contaminated Soil shall be completed and submitted to the appropriate field office for approval. If the contaminated material is to be treated on a site owned by a third party, contact the Tennessee Division of Solid Waste Management.

- 11. Name of Division approved laboratory selected _____
- 12. Name of Company/Person performing the UST system closure _____
- 13. Name of Company/Person obtaining soil/groundwater samples _____
- 14. Proposed date of UST system closure _____

A copy of the approved application shall be on the premises during closure of the UST system.

I, (print) _____, owner of the petroleum UST system(s) at this facility, agree to submit, within 45 days of collecting the samples, the analytical results for the UST system closure and will resolve all environmental problems resulting from a release from the UST system(s) at this site.

I certify under penalty of law, including but not limited to penalties for perjury, that the information contained in this form and on any attachments is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Signature of UST system owner
or owner's authorized representative

Date

State of _____

County of _____

Sworn to and subscribed before me by _____ on this date _____

My commission expires _____

Notary Public



STATE OF TENNESSEE DIVISION OF UNDERGROUND STORAGE TANKS

PERMANENT CLOSURE REPORT

The UST system owner shall complete and submit the original of this report within 45 days of collecting samples during the UST system closure assessment. Attach extra sheets if necessary. Include the following appendices in the report.

Appendix A: Include a table containing the field screening and analytical results. All results shall be reported in parts per million (ppm). The results shall be properly identified and correlated with the sampling locations on the site map.

Appendix B: Include the original or carbon copy of the laboratory analysis sheets. Photocopies are not acceptable. The facility name, UST Facility ID number, sample location and sample depth from ground surface shall be provided to the laboratory and printed on each laboratory analysis sheet.

Appendix C: Include an updated site map showing buildings, utilities, areas of overexcavation, borings, and sample points. The map shall also include soil stockpiles, their dimensions in feet, and properly labeled screening and sampling points.

Appendix D: Include documentation for treatment and/or disposal of soil, sludge, liquid, tanks and piping. (i.e. Application to Treat Petroleum Contaminated Soil, Solid Waste Permits, Landfill Disposal Manifests, etc.)

1. UST Facility ID#: _____ - _____
2. Facility Name _____
3. Division personnel with the appropriate field office were notified at least one working day before collecting soil samples for the UST system closure assessment. Yes___ No___
 Person contacted _____
 Field office _____
 Date _____
 Reported by _____
4. The tank atmosphere and work zone were regularly tested with a combustible gas indicator in accordance with UST regulations Appendix 5 (2) and (3). Yes___ No___
5. Method of purging tank atmosphere:
 Carbon dioxide gas___ Nitrogen___ Eductor-type air mover___ Diffused air blower___
 Dry ice(1.5 lb/100 gal)___ Other _____
6. Product piping was drained into the tank. Yes___ No___
7. Product piping was: Capped___ Removed___
8. All liquid/sludge was removed from the UST system. Yes___ No___ None encountered___
9. Method of liquid/sludge storage: _____
10. Method of liquid/sludge disposal: _____
 Manifests included in Appendix D. Yes___ No___ Not applicable___
11. Tank was labeled in accordance with the UST regulations Appendix 5 (4)(f).
 Yes___ No___ Not applicable___

12. Method of UST system storage/disposal:

Cut up for disposal ___ Stored on site ___ Stored off site ___
Other _____

UST systems stored on-site or off-site are subject to Rules 1200-1-15-.07(2)(e), (f) and (g).

13. Location of UST system storage/disposal: _____

Certificate of disposal included in Appendix D. Yes ___ No ___

14. Bedrock was encountered during UST system removal/closure-in-place. Yes ___ No ___

All contaminated material above the applicable cleanup level was excavated. Yes ___ No ___ Not Applicable ___

Native soil was sampled from floor of excavation. Yes ___ No ___

15. Water was encountered during excavation of UST system. Yes ___ No ___

Amount of water removed: _____ gals.

Water recharged within 24 hours. Yes ___ No ___

Recharge water was sampled. Yes ___ No ___

Analytical results are in Appendix B. Yes ___ No ___

Method of water disposal: _____

Manifests included in Appendix D. Yes ___ No ___

16. Water was encountered in the soil borings during closure-in-place. Yes ___ No ___ Not applicable ___

Water was sampled. Yes ___ No ___

Analytical results are in Appendix B. Yes ___ No ___

17. Amount of backfill material initially removed during UST system closure: _____ cubic yards

18. Total amount of contaminated material overexcavated after removal of the UST system: _____ cubic yards

If more than 100 cubic yards of material was overexcavated, Division personnel in the appropriate field office should have been contacted.

Division personnel in the appropriate field office were contacted. Yes ___ No ___ Not applicable ___

Person contacted _____
Field office _____
Date _____
Reported by _____

All excavated material remaining on the site of generation or on a site owned by the generator or subsidiary of the generator shall be placed on and covered with plastic until sampled or managed in accordance with Technical Guidance Document-005. Sampling the excavated material can be done at the time of removal or after proper treatment of the contaminated material.

If petroleum contaminated material is managed in accordance with Technical Guidance Document-009, an Application to Treat Petroleum Contaminated Soil shall be completed and submitted to the appropriate field office for approval. If the contaminated material is to be treated on a site owned by a third party, contact the Tennessee Division of Solid Waste Management.

All excavations shall be backfilled with material containing levels at or below 10 ppm BTX and/or 100 ppm TPH.

19. Mark all that apply regarding the management of the excavated material:

Stockpiled onsite___ Thermal treatment onsite___ Thermal treatment offsite___ Landfilled___
Other_____

Documentation is included in Appendix D. Yes___ No___

20. All sample containers were supplied by a Division approved laboratory. Yes___ No___

21. All samples were placed in the appropriate containers. Yes___ No___

22. Immediately after collection all samples were placed on ice and maintained at 4° C until delivered to a Division approved laboratory. Yes___ No___

23. Laboratory confirmation of petroleum contamination or discovery of free product was reported to the Division within 72 hours. Yes___ No___ Not Applicable___

Person contacted _____

Field office _____

Date _____

Reported by _____

24. A Notification Form reporting the closure of the tank system was submitted to the Nashville Central Office.
Yes___ No___

Failure to submit a Notification Form may result in the assessment of additional tank fees.

I certify under penalty of law, including but not limited to penalties for perjury, that the information contained in this form and on any attachments is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Name and Official Title of Owner
or Owner's Authorized Representative

Name (Print)

Official Title

Signature

Date

State of _____

County of _____

Sworn to and subscribed before me by _____ on this date _____

My commission expires _____

Notary Public - Print Name



STATE OF TENNESSEE DIVISION OF UNDERGROUND STORAGE TANKS

APPLICATION TO TREAT PETROLEUM CONTAMINATED SOIL

The UST system owner shall complete and submit the original of this application to the appropriate Division of Underground Storage Tanks field office for approval before treating the petroleum contaminated soil. Attach extra sheets if necessary.

REQUIREMENTS:

1. The UST system owner shall submit the treatment application within 45 days of the date of the laboratory results, or date of the UST system removal. The procedures outlined and approved in this application shall be implemented within 14 days from the date of approval. Technical Guidance Documents 005 and 009 shall be followed.
2. The contaminated soil shall be treated on the site of generation or on a site owned by the generator or a subsidiary of the generator. A copy of the approved application shall be kept by the UST system owner and shall be made available for review by State personnel. The owner/operator of the UST system shall contact the Division of Solid Waste Management (SWM) to obtain a Solid Waste Processing Facility Permit for soil treated on a site owned by a third party. If the application cannot be approved by this Division, SWM shall be contacted.
3. If the contaminated soil is transported from the site of generation for treatment, a copy of the deed for the treatment site shall be attached.
4. The Division of UST cannot approve the treatment of petroleum contaminated soil in a 100-year flood plain or wetland.
5. The Division of UST cannot approve the treatment of petroleum contaminated soil within 100 feet of any residence, business or other place of human occupancy.
6. The local Zoning Board shall be contacted to determine if the treatment of petroleum contaminated soil is permitted.
7. An impermeable barrier shall be placed between the contaminated soil and native soil. The barrier shall prevent contamination of the surrounding area. A berm shall be placed around the entire perimeter of the soil pile to protect it and the surrounding area from surface runoff. The soil layer shall not exceed 2 feet in depth.
8. The soil pile shall be covered with plastic before precipitation events. The cover shall prevent any moisture (rain, snow, sleet) from coming in contact with the contaminated soil.
9. The treatment process shall not disturb the impermeable barrier.
10. A site map shall be attached showing the treatment site, the location and size of the treatment area, the location of any nearby residence, businesses, or other dwelling, and any nearby water bodies (e.g. streams, creeks, ponds, etc.). **A SITE MAP IS REQUIRED. THE APPLICATION WILL NOT BE PROCESSED WITHOUT ONE.**

COMPLETE THE FOLLOWING:

1. Facility I.D. Number: _____
2. Name of UST System Owner: _____
Phone Number: (____)____-_____
3. Name of facility generating the contaminated soil: _____
Address: _____

4. Name of property owner of the treatment site: _____

5. Address of the treatment site: _____

6. Estimated quantity of contaminated soil: _____ cubic yards

7. Method of soil treatment: _____

If tilling, indicate frequency: _____

Describe type of impermeable barrier: _____

Thickness of soil pile: _____ feet

Describe type of berm: _____

8. Distance to nearest residence, business, or other place of human occupancy: _____ feet

9. Distance to nearest water body: _____ feet

10. Property is in a 100-year flood plain or wetland. Yes ___ No ___

11. Treatment site zoning: _____

12. Zoning agency contacted:

Person contacted _____

Office _____

Date _____

The zoning agency allows the treatment of petroleum contaminated soil on this property. Yes ___ No ___

I certify under penalty of law, including but not limited to penalties for perjury, that the information contained in this form and on any attachments is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

Name and Official Title of Owner
or Owner's Authorized Representative

Name (Print)

Official Title

Signature

Date

State of

County of

Sworn to and subscribed before me by _____ on this date _____

My commission expires _____

Notary Public