SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

THE UNIVERSITY OF TENNESSEE, KNOXVILLE
MAIN CAMPUS
2111 TERRACE AVENUE
KNOXVILLE, TENNESSEE 37996

Prepared for:

The University of Tennessee, Knoxville
Main Campus
2111 Terrace Avenue
Knoxville, Tennessee 37996

October 2022

EnSafe Contract: SBC529/000-01-2017
SES No.: GS.460.000.05
PITTS No.: UT540.009
EnSafe Project Number: 0888821830

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MANAGEMENT APPROVAL

This Spill Prevention, Control, and Countermeasure (SPCC) Plan was prepared in accordance with good engineering practices and has the full approval of management. Management will use whatever personnel, equipment, and materials are deemed necessary to control and mitigate releases at the University of Tennessee, Knoxville. Management is fully committed to the implementation of the requirements set forth in this SPCC Plan. The priorities of response team members are based upon protection of human life, mitigating environmental harm, and protection of property, respectively. This amended SPCC Plan will be implemented as described in this Plan within 6 months and will be reviewed and evaluated at least once every 5 years.

I have reviewed the recommendations for regulatory compliance as presented in this SPCC Plan. By virtue of my office, I have authority to approve this document on behalf of the facility and to commit the necessary resources to implement the Plan to comply with existing applicable federal and state laws.

Signature	Date Signed
Printed Name	Title

RECORD OF OWNER/OPERATOR PLAN REVIEWS/AMENDMENTS

In accordance with 40 CFR 112.3 and 112.5 of the Spill Prevention, Control, and Countermeasure (SPCC) Plan regulations, there are two situations that require an amendment to the University of Tennessee, Knoxville (UTK) Main Campus SPCC Plan.

Situation A

UTK Main Campus must review and amend the SPCC Plan when there is a change in the facility design, construction, operation, or maintenance that materially affects its potential for a discharge of oil into or upon the navigable waters of the United States or adjoining shore lines . . . or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act).

Examples of changes that may require amendment of the SPCC Plan include, but are not limited to, any of the following:

- Commissioning or decommissioning containers
- Replacing, reconstructing, or moving containers
- Replacing, reconstructing, or installing piping systems
- Construction or demolition that might alter secondary containment structures
- Changes of product or service
- Revising standard operation or maintenance procedures at a facility

An amendment made under this situation must be prepared within 6 months of the facility change and implemented as soon as possible, but not later than 6 months following preparation of the amendment.

Situation B

UTK Main Campus must complete a review and evaluation of the SPCC Plan at least once every 5 years from the date your last review was required under this part. As a result of this review and evaluation, you must amend your SPCC Plan within 6 months of the review to include more effective prevention and control technology if the technology has been field-proven at the time of the review and will significantly reduce the likelihood of a discharge as described in §112.1(b) from the facility. You must document your completion of the review and evaluation, and you must sign a statement as to whether you will amend the SPCC Plan, either at the beginning or end of the SPCC Plan, or in a log or an appendix to the SPCC Plan. The following words will suffice:

I have completed review and evaluation of the SPCC Plan for University of Tennessee, Knoxville on (date) and will (will not) amend the SPCC Plan as a result.

A Tennessee-licensed, professional engineer must review and certify any technical amendments to this SPCC Plan for it to effectively satisfy the SPCC rules.

An amendment made under this situation must be implemented as soon as possible, but not later than 6 months following preparation of the amendment.

Tables for Record of Review and Amendment

To facilitate SPCC Plan reviews and amendments, the following two tables are provided.

OWNER/OPERATOR RECORD OF FIVE-YEAR REVIEWS

I have completed review and evaluation of the SPCC Plan for University of Tennessee, Knoxville on the date indicated below and will (will not) amend the Plan as a result.

Signature of Reviewer	Date of Review	Will Amend the Plan	Will Not Amend the Plan
EnSafe Inc.	September 2012	X	
EnSafe Inc.	September 2017	X	
EnSafe Inc.	October 2022	X	

OWNER/OPERATOR RECORD OF SPCC PLAN AMENDMENTS

If applicable, briefly describe the type of amendment (i.e., administrative or technical). State how the amendment was completed (e.g., page change, addendum). Provide the date of the amendment and the printed name/position of person responsible for the amendment.

Description of Change (Administrative or Technical)	Date Entered	Posted By
Initial SPCC Plan	August 2009	QE2
Administrative Changes — Update Contact Information	September 2012	EnSafe Inc.
Technical Change — SPCC Plan Update	September 2017	EnSafe Inc.
Technical Change – SPCC Plan Update	October 2022	EnSafe Inc.

PROFESSIONAL ENGINEER'S CERTIFICATION

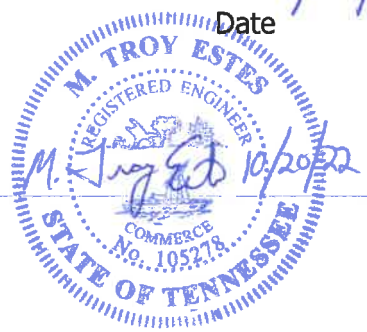
In accordance with Title 40 CFR 112.3(a), I hereby certify that I have or my agent has visited and examined the facility in accordance with 40 CFR 112.3(d), and being familiar with the provisions of 40 CFR 112, United States Environmental Protection Agency Regulations on Oil Pollution Prevention, attest that the Spill Prevention, Control, and Countermeasure (SPCC) Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of this part; that procedures for required inspections and testing have been established; and that the SPCC Plan is adequate for the facility.

This certification in no way may be construed as a warranty by the Licensed Professional Engineer that the adequate SPCC Plan will be fully implemented, and in no way relieves the owner or operator of the facility of its duty to prepare and fully implement this SPCC Plan in accordance with the requirements of 40 CFR 112.

This SPCC Plan supersedes the previous SPCC Plan dated September 2017.

M. Troy Estes — 10/20/2022

Signature — Date
M. Troy Estes, PE
State of Tennessee, PE No. 105278
Expiration Date: 8/31/2024



CERTIFICATION OF SUBSTANTIAL HARM DETERMINATION FORM

FACILITY NAME: The University of Tennessee, Knoxville
FACILITY ADDRESS: 211 Terrace Avenue
Knoxville, Tennessee 37996

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

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

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate United States Environmental Protection Agency formula or a comparable formula[1]) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?
   YES_____ NO__X__

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate United States Environmental Protection Agency formula or a comparable formula[1]) such that a discharge from the facility would shut down a public drinking-water intake[2]?
   YES_____ NO__X__

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

Certification

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

Signature _____ **Date Signed** _____

Name _____ **Title** _____

1 If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.
2 For the purposes of 40 CFR 112, public drinking water intakes can be compared to public water systems as described at 40 CFR 143.2(c).

EXECUTIVE SUMMARY

This Spill Prevention, Control, and Countermeasure (SPCC) Plan for the University of Tennessee's Main Campus in Knoxville, Tennessee, was developed per 40 CFR 112. This SPCC Plan amends and supersedes the previous SPCC Plan dated September 2017.

There are 10 regulatory deficiencies identified below:

112.7(a) — Several 55-gallon drums of oil product located in the Steam Plant Shed and Storage Yard were not labeled. Drums must be labeled with their contents, types of oil and storage capacity. Unlabeled used oil drums were noted at the Steam Plant and Storage Yard during the August 3, 2022, SPCC inspection.

112.7(c) — Six 300-gallon used cooking oil aboveground storage tanks (ASTs) across the facility appear to be single-walled. Secondary containment must be provided so that any discharge from an oil container will not escape the containment system before cleanup occurs.

112.7(c) — No secondary containment is provided for one AST in the Storage Yard. A tank weld on the double-walled 1,000-gallon diesel AST in the Storage Yard has failed, and the tank is no longer secondarily contained. Secondary containment must be provided that is capable of containing the entire capacity of this tank and (if exposed to precipitation) sufficient freeboard to contain precipitation. Examples of corrective action that could be considered for addressing this deficiency are: (1) placing the tank within secondary containment with sufficient volume to contain the entire 110% of its contents, (2) replacing the tank, or (3) repairing the weld on the tank.

112.7(c) — Insufficient secondary containment is provided for one 275-gallon used oil tote in the Storage Yard. Secondary containment must be provided that is capable of containing the entire capacity of this tank and (if exposed to precipitation) sufficient freeboard to contain precipitation. Examples of corrective action that could be considered for addressing this deficiency are: (1) placing the tank within secondary containment with sufficient volume to contain the entire 110% of its contents, (2) replacing the tank, or (3) repairing the weld on the tank.

112.7(c) — No secondary containment is provided for multiple 55-gallon oil storage drums stored within the covered, open-walled shed associated with the Steam Plant. In addition, several 55-gallon drums are stacked on-top of each other in this area. Two 55-gallon product oil drums at Fleet

Management are stored on an undersized spill pallet and multiple 55-gallon drums are stored outside at the Storage Yard with inadequate secondary containment. Secondary containment must be provided that is capable of containing the entire capacity of the drum and (if exposed to precipitation) sufficient freeboard to contain precipitation. Examples of corrective action that could be considered for addressing this deficiency are: (1) placing the drums on spill pallets with sufficient volume to contain the entire contents of each drum, (2) placing the drums inside a building, or (3) removing the drums from the site if they will no longer be in use at the facility.

112.7(c) — No spill kits or spill response materials/equipment were near most ASTs as noted during the August 3, 2022, SPCC inspection. Spill response materials must be staged near ASTs and be readily-available in the event of a release from the ASTs. Spill response equipment may include items such as oil-absorbing pads, booms (socks), or absorbent granular material.

112.8(c)(10) — The 412-gallon transformer adjacent to Thompson Boling Arena was observed to have a leak that had not been addressed. Any visible discharge which results in a loss of oil from any container must be corrected promptly.

112.7(e) — An inspection program for the ASTs and associated valves and appurtenances does not appear to have been implemented. Although generators are tested weekly, formal inspections in accordance with SPCC regulations have not been documented. Routine and non-routine inspections must be performed for the ASTs and other oil containers at the minimum frequencies indicated in Tables 7-1 and 7-2 to comply with industry standards. Non-routine inspections should be conducted at least on an annual basis. Records of required routine inspections must be retained at the facility for at least 3 years and records of required non-routine inspections must be retained at the facility for at least 5 years.

112.7(e) — A third-party contractor performs inspections of the hydraulic elevators and maintains the records of the inspections; however, the facility does not maintain historical copies of these records onsite. Records of required routine inspections must be retained at the facility for at least 3 years and records of required non-routine inspections must be retained at the facility for at least 5 years.

112.7 (f) — Records of completion of annual SPCC training for all necessary University of Tennessee personnel were not available onsite at the time of the August 3, 2022, SPCC inspection. Training must be conducted annually for SPCC leaders and officiators to address the information included in Section 8 of the SPCC Plan and documented accordingly.

112.7(g) — Adequate security is not provided for the AST storage area for the used cooking oil tanks throughout the facility. Oil storage containers must be secured in a way that prevents unauthorized access to the tanks. The 300-gallon used cooking oil containers should be protected by a barrier to prevent vehicle strikes in high traffic areas. A concrete dike could provide the required secondary containment noted above and protection from vehicle strikes.

The following Best Engineering Practices are also recommended for The University of Tennessee's Main Campus in Knoxville, Tennessee:

Underground storage tanks at UTK Main Campus are inspected annually; however, inspections records were not available for review at the time of the site inspections and facility personnel were unaware of records location(s). Recommend a centralized location for all records for ease of access.

While the Steam Plant drum storage is under roof and secondarily contained within concrete bermed area, the 55-gallon drums are inappropriately placed on spill pallets. Recommend moving product containers directly over spill pallets in order to increase effectiveness of the pallets.

Spill kits that were available, have faded labels or inadequate supplies. Spill kits should be relabeled for quick identification in an emergency. Spill kits should be strategically positioned where they are readily available in the event of a release. Spill kits are not fully stocked nor near oil storage containers and oil transfer areas. Also, drain covers are recommended for spill kits associated with oil containers that are near floor drains.

Discoloration or rusting/corrosion appears visible on the surface of the Neyland Stadium diesel generator AST. Rust/corrosion should be removed to the extent practical and the tank repainted to reduce the potential of further deterioration of tank surfaces.

There are seven generators in the Storge Yard with diesel fuel belly tanks that are reportedly empty. If there are no plans to return these seven generators to service, UTK Main Campus should consider permanently closing the tanks in accordance with 40 CFR 112.2. As long as these seven ASTs are maintained in their current state, they are still regulated by the requirements of this SPCC Plan, including routine inspections, even if they are empty.

The used oil underground storge tank located east of the Fleet Management Building, along UT Drive, is reportedly not in service. UTK Main Campus should consider permanently closing the UST in accordance with Tennessee Department of Environment and Conservation Underground Storage Tank Program, Rule 0400-18-01-.07.

UTK Main Campus should utilize oil absorbent inserts (or another containment strategy, such as storm drain covers) for the used cooking oil containers that are staged immediately adjacent to storm water drains to prevent the migration of oil with storm water.

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1.0 INTRODUCTION

112.1(b) Except as provided in paragraph (d) of this section, this part applies to any owner or operator of a non-transportation-related onshore or offshore facility engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using, or consuming oil and oil products, which due to its location, could reasonably be expected to discharge oil in quantities that may be harmful, as described in part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act) that has oil in: (1) Any aboveground container; (2) Any completely buried tank as defined in § 112.2; (3) Any container that is used for standby storage, for seasonal storage, or for temporary storage, or not otherwise ''permanently closed'' as defined in § 112.2; (4) Any ''bunkered tank'' or ''partially buried tank'' as defined in § 112.2, or any container in a vault, each of which is considered an aboveground storage container for purposes of this part.

Non-transportation-related facilities refer to all fixed facilities, including support equipment, but excluding certain pipelines, railroad tank cars en route, transport trucks en route, and equipment associated with the transfer of bulk oil to or from water transportation vessels. The term also includes mobile or portable facilities, such as drilling or workover rigs, production facilities, and portable fueling facilities while in a fixed, operating mode.

A facility is regulated under 40 CFR 112 if the completely buried oil storage capacity is over 42,000 gallons or the aggregate aboveground oil storage capacity is over 1,320 gallons. The aboveground storage capacity is based on containers with a capacity of 55 gallons or greater.

Since the University of Tennessee (UTK) Main Campus in Knoxville, Tennessee, has an aboveground storage capacity exceeding 1,320 gallons of oil in containers 55 gallons or larger, the facility is subject to the federal regulation for Oil Pollution Prevention, Code of Federal Regulations, Title 40, Part 112 (40 CFR 112). The regulation requires Spill Prevention, Control, and Countermeasure (SPCC) Plans to be implemented by facilities with oil storage units or facilities that store or transfer oil. The purpose of the SPCC Plan is to establish procedures, methods, equipment, and other criteria to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon navigable waters of the United States or adjoining shorelines. The facility stores petroleum products onsite that could potentially discharge to Fort Loudon Lake, an impoundment of the Tennessee River. The UTK Main Campus facility does not qualify for the exemptions listed in 40 CFR 112.1(d).

1.1 Plan Update and Amendment

This SPCC Plan for UTK Main Campus will be reviewed by the owner or operator at least once every 5 years as outlined in the Owner/Operator Record of Five-Year Reviews (page iii). Furthermore, the SPCC Plan is required to be amended within 6 months of any material changes to the facility and the changes implemented within 6 months of the SPCC Plan amendment. Any technical amendments to the SPCC Plan must be reviewed and certified by a Tennessee-licensed, professional engineer.

1.2 Plan Purpose and Availability

The SPCC Plan will address the following:

- Spill prevention — System components and characteristics, and operating procedures to prevent oil spills.
- Spill control — Control measures to prevent a spill from entering navigable waters.
- Spill countermeasures — Countermeasures to contain, cleanup, and mitigate the effects of an oil spill that could impact navigable water.

A current copy of the SPCC Plan will be maintained at the facility. The SPCC Plan will be kept accessible to facility personnel, responders, and inspectors.

1.3 Plan Focus

This SPCC Plan is designed to address oil-containing structures at UTK Main Campus, except for any container with capacity less than 55 gallons and pole-mounted electrical transformers, which typically have capacities of 20 to 30 gallons, and therefore, are not subject to the SPCC rules. The major high-risk oil-containing structures will receive special attention to expedite and simplify the SPCC Plan development, implementation, and amendment. Low-risk oil containing structures, such as drums, are addressed as well, but not at the same level of detail as larger-capacity containers. The level of detail is intended to be commensurate with the level of risk (i.e., potential for oil release and subsequent harm/damage to navigable waterways).

As discussed in the preamble of the final SPCC rule published July 17, 2002, the following types of oil-filled operational equipment (OFOE) are specifically excluded from the United States Environmental Protection Agency (U.S. EPA) definition of “bulk storage container”:

- In-use electrical equipment (e.g., transformers, circuit breakers, and capacitors).
- Operating equipment (e.g., lawn mowers, snow blowers, elevator lifts, and motive items).
- Manufacturing equipment (e.g., hydraulic presses, hydraulic reservoirs, and enclosed lubricating systems).

- Lubricating oil compartments on generators; however, fuel tanks associated with generators are considered bulk storage containers.

In the final rule, U.S. EPA clearly differentiated between the bulk storage of oil and the operational use of oil. Facilities with equipment containing "operational use" oil are not required to comply with the strict provisions of 40 CFR 112.8(c), such as secondary containment, testing and inspection, and oil level gauges. The intent of 40 CFR 112.8(c) is to ensure oil spill prevention provisions are effectively in place for facilities that practice the bulk storage of oil.

However, OFOE must meet other SPCC requirements, such as the general oil spill prevention requirements as described in 40 CFR 112.7(c) — to provide appropriate containment and/or diversionary structures (e.g., dikes, curbing, culverts, weirs/barriers, retention ponds, drainage systems, or sorbent material) to prevent discharged oil from reaching a navigable watercourse or affecting certain natural resources. The operator must also have an inspection or monitoring program for the equipment to detect a failure and/or discharge. An individual impracticability determination for this equipment is not required.

1.4 Oil-Water Separators/Grease Traps

Section 112.1(d)(6) exempts oil-water separators used exclusively for wastewater treatment that are flow-through separators and are not engaged in a static process in an isolated container. A grease trap that intercepts and congeals oil and grease from liquid waste is considered wastewater treatment and exempt from SPCC rules. However, a separate container storing oil removed from an exempt separator is considered a bulk storage container and is subject to the SPCC rule requirements.

1.5 Plan Organization and Regulatory References

In general, this SPCC Plan follows the sequence of the regulatory requirements outlined in 40 CFR 112.7 and 112.8 and discusses the facility's conformance to those applicable regulatory requirements. For sections with regulatory references, the federal SPCC regulatory requirements are summarized in Table 1-1.

Table 1-1
Regulatory Requirement and Text Cross-Reference Matrix

Topic	CFR Citation	Spill Prevention, Control, and Countermeasure Plan Page or Section
Requirement for an SPCC Plan	40 CFR 112.1	1.0 and pages ii- iii
Professional Engineer Certification	40 CFR 112.3(d)	page v
Plan Available Onsite	40 CFR 112.3(e)	1.2
Reportable Discharges	40 CFR 112.4(a)	17.0
Changes Required by Regional Administrator Implemented	40 CFR 112.4(d),(e)	18.1
Plan Amendment — Change Affecting Potential for Discharge	40 CFR 112.5(a)	1.1
Plan Amendment — 5-Year Plan Review and Amendment	40 CFR 112.5(b)	1.1 and page iv
Professional Engineer Certification of Technical Amendments	40 CFR 112.5(c)	1.1 and page v
Summary of Deficiencies from Rule Requirements	40 CFR 112.7(a)(2)	Executive Summary
Facility Diagram	40 CFR 112.7(a)(3)	3.1, Appendix A
Oil Storage	40 CFR 112.7(a)(3)(i)	3.2, Table 3-1
Discharge Prevention and Routine Handling	40 CFR 112.7(a)(3)(ii)	3.2, 10.0, and 16.0
Discharge or Drainage Controls	40 CFR 112.7(a)(3)(iii)	3.2, 15.0, and Table 3-1
Countermeasures for Discharge Discovery, Response, and Cleanup	40 CFR 112.7(a)(3)(iv)	4.0 and 17.0
Methods of Disposal of Recovered Materials	40 CFR 112.7(a)(3)(v)	17.0
Contact List and Telephone Numbers	40 CFR 112.7(a)(3)(vi)	17.0
Discharge Reporting Procedures	40 CFR 112.7(a)(4)	2.2, 17.2
Discharge Emergency Response Procedures	40 CFR 112.7(a)(5)	17.0
Potential Spill Predictions, Volumes, Rates, and Control	40 CFR 112.7(b)	4.0
Drainage Prevention Diversionary Structures and Containment	40 CFR 112.7(c)	5.0
Impracticality of Secondary Containment	40 CFR 112.7(d)	6.0
Inspection/Record Keeping	40 CFR 112.7(e)	7.0
Personnel Training and Spill Prevention Procedures	40 CFR 112.7(f)(1-3)	8.0
Personnel Instructions	40 CFR 112.7(f)(1)	8.1
Designated Person Accountable for Spill Prevention	40 CFR 112.7(f)(2)	8.2
Spill Prevention Briefings	40 CFR 112.7(f)(3)	8.3
Site Security	40 CFR 112.7(g)	9.0
Loading/Unloading Operations	40 CFR 112.7(h)(1-3)	10.0
Adequate Secondary Containment for Loading/Unloading Racks	40 CFR 112.7(h)(1)	10.1
Warning or Barrier System for Vehicles	40 CFR 112.7(h)(2)	10.2
Vehicles Examined for Lowermost Drainage Outlets before Leaving	40 CFR 112.7(h)(3)	10.3
Brittle Fracture or Other Catastrophe of Field-Constructed Tanks	40 CFR 112.7(i)	11.0
Conformance with Other Applicable Requirements	40 CFR 112.7(j)	12.0
Oil-Filled Operational Equipment	40 CFR 112.7(k)	13.0
Drainage Control	40 CFR 112.8(b)(1-5)	14.0
Drainage from Diked Storage Areas	40 CFR 112.8(b)(1)	14.1
Valves Used on Diked Storage Areas	40 CFR 112.8(b)(2)	14.2
Plant Drainage Systems from Undiked Areas	40 CFR 112.8(b)(3)	14.3
Final Discharge of Drainage	40 CFR 112.8(b)(4)	14.4
Facility Drainage Systems and Equipment	40 CFR 112.8(b)(5)	14.5
Bulk Storage Tanks/Secondary Containment	40 CFR 112.8(c)(1-11)	15.0
Container Compatibility with Its Contents	40 CFR 112.8(c)(1)	15.1
Diked Area Construction and Containment Volume for Storage Containers	40 CFR 112.8(c)(2)	15.2
Diked Area, Inspection, and Drainage of Rainwater	40 CFR 112.8(c)(3)	15.3
Corrosion Protection of Buried Metallic Storage Tanks	40 CFR 112.8(c)(4)	15.4
Corrosion Protection of Partially Buried Metallic Tanks	40 CFR 112.8(c)(5)	15.5

Table 1-1
Regulatory Requirement and Text Cross-Reference Matrix

Topic	CFR Citation	Spill Prevention, Control, and Countermeasure Plan Page or Section
Aboveground Tank Periodic Integrity Assessment	40 CFR 112.8(c)(6)	15.6
Control of Leakage through Internal Heating Coils	40 CFR 112.8(c)(7)	15.7
Liquid-Level Sensing Devices	40 CFR 112.8(c)(8)	15.8
Observation of Disposal Facilities for Effluent Discharge	40 CFR 112.8(c)(9)	15.9
Visible Oil Leak Corrections from Tank Seams and Gaskets	40 CFR 112.8(c)(10)	15.10
Appropriate Position of Mobile or Portable Oil Storage Containers	40 CFR 112.8(c)(11)	15.11
Facility Transfer Operations	40 CFR 112.8(d)(1-5)	16.0
Buried Piping Installation Protection and Examination	40 CFR 112.8(d)(1)	16.1
Not-In-Service and Standby Service Terminal Connections	40 CFR 112.8(d)(2)	16.2
Pipe Supports Design	40 CFR 112.8(d)(3)	16.3
Aboveground Valve and Pipeline Examination	40 CFR 112.8(d)(4)	16.4
Aboveground Piping Protection from Vehicular Traffic	40 CFR 112.8(d)(5)	16.5

2.0 FACILITY INFORMATION

2.1 Facility Owner/Operator, Address, and Telephone

SPCC Plan Administrator:	Facility Services
Facility Owner:	State of Tennessee
Facility Operator:	The University of Tennessee
Address:	2111 Terrace Avenue Knoxville, Tennessee 37966 865-974-1000
Facility Contacts:	
Primary:	Derek Bailey, Zone Maintenance Director 865-659-6377 (cell) 865-946-7777 (24-hour)
Secondary:	Garrett Ferry, Coordinator III 854-805-4007 (cell) 865-946-7777 (24-hour)

2.2 Facility Contact(s)

112.7(a)(3)(vi): You must also address in your plan contact list and phone numbers for the facility response coordinator, National Response Center, cleanup contractors with whom you have an agreement for response, and all appropriate federal, state, and local agencies who must be contacted in case of a discharge as described in 112.1(b).

Contacts for the Spill Prevention, Control, and Countermeasure Plan

Table 2-1
Spill Prevention, Control, and Countermeasure Plan Contacts

Name, Title/Position	Telephone Numbers	
	Primary	Emergency/Alternative
Derek Bailey, Zone Maintenance Director	865-659-6377	865-946-7777
Garrett Ferry, Coordinator III	854-805-4007	865-946-7777
Facility Maintenance 24-hour Emergency Dispatch	865-946-7777	865-946-7777
UTK Police Dispatch	865-974-3111	865-974-3111
UTK Environmental Health and Safety	865-974-5084	865-974-9586 757-876-5386 (Sandra Prior – EHS Director)
EnSafe Inc., Spill/Spill Prevention, Control, and Countermeasure Plan and Tank Consultant	615-255-9300	888-590-8885
Laura Waynick, Department of General Services Environmental Compliance Manager	615-428-8101	615-428-8101

2.3 Facility Operations and Oil Storage Overview

UTK Main Campus is a public sun-grant and state land-grant university. The facility is in Knoxville, Knox County, Tennessee. The facility is comprised of over 290 buildings and structures including those for academics, research, athletics, housing, administration, and parking. UTK's Main Campus is comprised of approximately 580 acres. UTK Main Campus operates 24 hours per day, 7 days per week. UTK Main Campus maintenance staff operate on-call 24 hours per day, 7 days per week. UTK Police patrol 24 hours per day, 7 days per week.

UTK Main Campus has its own Steam Plant at the corner of Neyland Drive and Lake Loudon Boulevard. The Steam Plant has five 25,000-gallon diesel aboveground storage tanks (ASTs), two 20,000-gallon diesel ASTs, and one generator with a 2,500-gallon diesel belly tank. A Storage Yard, immediately south of the Steam Plant, conducts maintenance activities with drum and tote storage, a 1,000-gallon diesel AST, a 250-gallon gasoline AST, and multiple out-of-service generators and ASTs. The Fleet Management area conducts vehicle maintenance and includes a 250-gallon motor oil AST, 250-gallon used oil AST, multiple 55-gallon drums, two 12,000-gallon gasoline underground storage tanks (USTs), and one reportedly out-of-service 1,000-gallon used oil AST. Dining halls and restaurants throughout the UTK campus generate cooking oil which is stored in

300-gallon ASTs. The Kingston Pike Building utilizes a 3,000-gallon diesel UST, Walters Academic Building utilizes a 500-gallon diesel AST, and Neyland Stadium (near Gate 18) utilizes a 400-gallon diesel AST, all for emergency generators. UTK Main Campus contains numerous diesel emergency generators, hydraulic oil elevator reservoirs, and transformers.

2.4 Drainage Pathway and Distance to Navigable Waters

Figure 2 in Appendix A shows storm water drainage flow patterns. Most storm water runoff from the facility is conveyed via above- and below-ground storm water conveyance features. Some storm water is comingled with City of Knoxville storm water from roadways and surrounding businesses. Storm water from UTK Main Campus flows toward First Creek, Second Creek, or Third Creek, and ultimately discharges to Fort Loudon Reservoir, an impoundment of the Tennessee River.

Storm water at the Steam Plant and Storage Yard areas flow via above- and below-ground storm water conveyance features toward Steam Plant Outfall 1 (OF#001), as shown on Figure 5 in Appendix A. Storm water drainage at OF#001 is from the entirety of the Steam Plant including parking areas, the chemical delivery area, transformers, generators, diesel storage ASTs, and graveled/paved facility access roads. Storm water drainage at OF#001 also includes the Storage Yard including the inactive generators and transformers, 55-gallon drum storage, AST storage area (diesel and gasoline ASTs), and graveled/paved access roads.

3.0 PETROLEUM STORAGE INFORMATION

3.1 Facility Diagram

112.7(a)(3): Describe in your Plan the physical layout of the facility and include a facility diagram, which must mark the location and contents of each fixed oil storage container and the storage area where mobile or portable containers are located. The facility diagram must identify the location of and mark as "exempt" underground tanks that are otherwise exempted from the requirements of this part under §112.1(d)(4). The facility diagram must also include all transfer stations and connecting pipes, including intra-facility gathering lines that are otherwise exempted from the requirements of this part under §112.1(d)(11).

Figure 2 in Appendix A shows the locations and contents of oil storage containers with capacities of 55 gallons or more.

3.2 Oil Storage, Prevention, and Control

112.7(a)(3)(i): You must also address in your Plan the type of oil in each fixed container and its storage capacity. For mobile or portable containers, either provide the type of oil and storage capacity for each container or provide an estimate of the potential number of mobile or portable containers, the types of oil, and anticipated storage capacities.; 112.7(a)(3)(iii): You must also address in your Plan discharge or drainage controls such as secondary containment around containers and other structures, equipment, and procedures for the control of a discharge.

Table 3-1 provides detailed information on oil storage containers identified at the facility that are subject to SPCC requirements. Information provided includes: location, container type, container capacity, substance stored, secondary containment, and flow direction/drainage basin.

Sections 10 and 16 provide information on oil transfer operations.

3.3 Permanently Closed Tanks

ASTs that are inactive, but not permanently closed, are still subject to the requirements of 40 CFR 112, including regular inspections and adequacy of secondary containment. To avoid these requirements, a tank must be "permanently closed" in accordance with the definition per 40 CFR 112 shown as follows.

40 CFR 112.2 Definitions:	
Permanently closed means any container or facility for which:	
(1)	All liquid and sludge has been removed from each container and connecting line; and
(2)	All connecting lines and piping have been disconnected from the container and blanked off (i.e., capped or blank flanged), all valves (except for ventilation valves) have been closed and locked, and conspicuous signs have been posted on each container stating that it is a permanently closed container and noting the date of closure.

ASTs that are inactive will meet the above conditions if removed from the inspection program or taken out of secondary containment.

The following out-of-service items are currently being staged at the Storage Yard: seven generators, three ASTs, and one pad-mounted transformer. Each of these tanks are reportedly empty; however, the tanks are not marked as out-of-service or permanently closed. One 1,000-gallon used oil UST at Fleet Management is reportedly out-of-service but has not been properly closed. These tanks are included in Table 3-1.

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
Aboveground Storage Tanks									
 Fleet Management Motor Oil AST	AST	Steel/Flex Hose	N/N	Visual observation, in limited access area under cover	Motor Oi/250	>250	Unknown	Radial to concrete floor of Fleet Management Building	Plastic secondary containment
 Fleet Management Used Oil AST	AST	Steel/Flex Hose	Y/N	Visual observation, in limited access area within Fleet Management Building	Used Oil/250	>250	2022	Radial to concrete floor of Fleet Management Building	Double-walled
 Neyland Stadium Gate 18 Diesel AST for Generator	AST	Steel/Steel	Y/N	Visual observation, in limited access area under cover	Diesel/400	>400	Unknown	Radial to concrete pad then radial to surrounding ground	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Steam Plant Boiler Back-up Tanks	ASTs	Steel/Steel	N/Y	CLDS (Yokogawa), secondary containment dike with locked manual drainage valve, tank levels compared weekly with CLDS	Diesel/ 5 @ 25,000 each	52,000	2015	Drain valve to storm sewer/ ~640 feet/ Steam Plant Outfall #001 to Tennessee River	Concrete containment dike
 Steam Plant Diesel Tanks	ASTs	Steel/Steel	Y/Y	CLDS, secondary containment dike with manual drainage valve, in limited access area	Diesel/ 2 @ 20,000 each	>20,000	2009	North/ ~740 feet/ Steam Plant Outfall #001 to Tennessee River	Double-walled, concrete containment dike
 Storage Yard Inactive ASTs	ASTs	Steel/NA	Y/NA	Visual observation, in limited access area	Reportedly empty, Diesel/ 3 @ 700 each	>700 each	Unknown	Radial to surrounding gravel then Northeast/ Tennessee River	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Storage Yard Diesel Tank	AST	Steel/Flex Hose	Y/N	Double-walled, float gauge, in limited access area	Diesel/1,000	0	Unknown	Northeast/ ~800 feet/ Steam Plant OF#001 to Tennessee River	Double-walled but broken weld results in loss of secondary containment
 Storage Yard Gasoline Tank	AST	Steel/Flex Hose	Y/N	Double-walled, float gauge, in limited access area	Gasoline/250	>250	Unknown	Northeast/ ~700 feet/ Steam Plant OF#001 to Tennessee River	Double-walled
 Walters Academic Building Diesel AST for generator	AST	Steel/Steel	Y/NA	Manually gauged	Diesel/500	>500	Unknown	Radial to concrete floor	Double-walled

Table 3-1
Facility Oil Storage Inventory

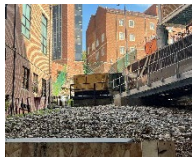
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
Generators									
 11th Street Parking Garage	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly. Spill kit	Diesel/366	>366	Unknown	Radial to concrete pad	Double-walled
 Allan Jones Aquatic Center	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/366	>366	Unknown	Radial to concrete pad	Double-walled
 Alumni Memorial Building	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/200	>200	Unknown	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Anderson Sports Training Center	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/420	>420	Unknown	Radial to concrete pad then West to adjacent storm water drain	Double-walled
 Ayres Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/300	>300	Unknown	Radial to concrete floor then to nearby storm water drain	Double-walled
 Carrick Residence Halls	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly.	Diesel/ Unknown	Unknown	Unknown	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Claxton Education Building	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/300	>300	Unknown	Radial to concrete pad	Double-walled
 Clement Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly. Spill kit.	Diesel/300	>300	Unknown	Radial to concrete pad then to storm water drains along 17th Street.	Double-walled
 Dabney/Bueler Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/140	>140	Unknown	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Dogwood Residence Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/372	>372	Circa 2018	Radial to concrete pad	Double-walled
 Dougherty Engineering Building	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/660	>660	Unknown	Radial to concrete pad	Double-walled
 Facility Services Building	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/ Unknown	Unknown	2015	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Fleet Managment	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/ 315	>315	Unknown	Radial to trailer deck	Double-walled
 Fred Brown Residnce Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/2,000	>2,000	2014	Radial to concrete pad	Double-walled
 Geier Residence Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/332	>332	2016	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Haslam Business Building	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/366	>366	Unknown	Radial to concrete pad	Double-walled
 Henson Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/150	>150	Unknown	Radial to concrete pad	Double-walled
 Hesler Biology Building	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/800	>800	Unknown	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Hess Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/300	>300	Unknown	Radial to concrete pad	Double-walled
 Hodges Library	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly, spill kit.	Diesel/500	>500	Unknown	Radial to concrete pad	Double-walled
 Howard H. Baker	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/366	>366	Unknown	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Jessie Harris	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/546	>546	Unknown	Radial to concrete pad	Double-walled
 John Tickle Engineering Building	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/6,610	>6,610	Unknown	Radial to concrete pad	Double-walled
 Laurel Apartments	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/500	>500	Unknown	Radial to concrete pad then to floor drain to storm water drain	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Magnolia Residence Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/372	>372	Circa 2018	Radial to concrete pad	Double-walled
 Massey Residence Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/300	>300	Unknown	Radial to concrete pad	Double-walled
 McClung Tower	Generator	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/650	>650	Unknown	Radial to garage floor	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Min H. Kao Electrical Engineering	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/2,000	>2,000	Unknown	Radial to concrete pad	Double-walled
 Morrill Pump House	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/1,400	>1,400	Unknown	Radial to concrete pad	Double-walled
 Mossman	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/ Unknown	Unknown	Unknown	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Natalie Haslam Music Building	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/526	>526	Unknown	Radial to concrete pad	Double-walled
 Neyland Stadium North End Gate 21	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/350	>350	Unknown	Radial to concrete pad	Double-walled
 Neyland Stadium Gate 25	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/300	>300	Unknown	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Neyland Stadium Gate 17	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/700	>700	Unknown	Radial to concrete pad	Double-walled
 Pratt Pavilion	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/172	>172	Unknown	Radial to concrete pad	Double-walled
 Regal Soccer Stadium	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/195	>195	Unknown	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Robinson Residence Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/332	>332	2016	Radial to concrete pad	Double-walled
 Science and Engineering Research Facility (SERF)	Generator Belly Tanks	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/ 2 @ 300 each	>300 each	Unknown	Radial to concrete pad	Double-walled
 Senter Hall	Generator Belly Tank	Steel/NA	Y/NA	Manually gauge, tested weekly	Diesel/400	>400	Unknown	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Steam Plant	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, in limited access area	Diesel/2,500	>2,500	Unknown	Radial to concrete pad East/ ~520 feet/ Steam Plant OF#001 to Tennessee River	Double-walled
 Stokley Management Center	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, locked access area, tested weekly	Diesel/950	>950	Unknown	Radial to concrete pad	Double-walled
 Storage Yard Inactive Generator	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, in limited access area	Reportedly empty Diesel/ 7 @ ~100 each	~100 each	Unknown	Radial to surrounding ground	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Strong Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/5,040	>5,040	2017	Radial to concrete pad	Double-walled
 Student Health Center	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/946	>946	Unknown	Radial to concrete pad	Double-walled
 Student Recreational Facility (TRECS)	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, located in locked area, tested weekly	Diesel/315	>315	Unknown	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Student Union	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly, behind locked gate	Diesel/3,460	>3,460	2015	Radial to concrete pad	Double-walled
 Taylor Law/Blount Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly Spill kit located inside Taylor Law Center	Diesel/300	>300	Unknown	Radial to concrete pad	Double-walled
 Terrace Avenue Garage	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/408	>408	Unknown	Radial to concrete pad	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Thompson Boling Area	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/660	>660	Unknown	Radial to concrete pad	Double-walled
 Volunteer Boulevard Parking Garage	Generator Belly Tank	Steel/NA	Y/NA	Manually gauge, secondarily contained, tested weekly	Diesel/1,726	>1,726	2017	Radial to concrete pad then possibly to adjacent storm water drains	Double-walled
 Volunteer Hall Parking Garage	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/360	>360	Unknown	Radial to concrete pad then to nearby floor drain	Double-walled

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 West Campus Rocky Top Dining Hall	Generator Belly Tank	Steel/NA	Y/NA	Visual observation, tested weekly	Diesel/2,703	>2,703	2021	Radial to secondary containment	Double-walled
Drums/Totes									
 Doughtery Engineering Building	Drums	Steel/NA	N/NA	Located in a limited access area, visual observation	Product Oil/ 2 @ 55 each	>55	NA	Radial to building concrete floor	Inside building
 Fleet Management	Drums	Steel/Flex Hose	N/N	Located in a limited access area, visual observation	Product Oil/ 2 @ 55 each	66	NA	Radial to spill pallet and potentially to surrounding concrete pad	Spill pallet

Table 3-1
Facility Oil Storage Inventory

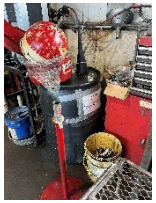
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Fleet Management	Drums	Steel/Flex Hose	N/N	Located in a limited access area, visual observation	Product Oil/ 2 @ 55 each	>55	NA	Radial to surrounding concrete floor inside building.	Inside building
 Steam Plant	Drums	Steel/NA	N/NA	Visual observations through bung hole, absorbent located within Steam Plant	Product Oil/ 6 @ 55 each Used Oil/ 3 @ 55 each	>55	NA	Contained within Steam Plant Building.	Inside building located on spill pallets within 4- to 6-inch curbed concrete secondary containment area
 Storage Yard	Tote	Plastic/NA	N/NA	Visual observations through bung hole, located within secondary containment	Used Oil/ 275	<275	NA	Northeast ~550 feet/ Steam Plant OF#001 to Tennessee River	Located within secondary containment and under cover

Table 3-1
Facility Oil Storage Inventory

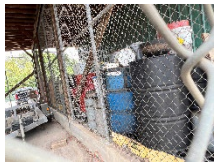
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Storage Yard	Drum	Steel/NA	N/NA	Visual observations through bung hole	Used oil/55	0	NA	Northeast ~550 feet/ Steam Plant OF#001 to Tennessee River	None
 Storage Yard	Drums	Steel/NA	N/NA	Visual observations through bung hole	New product oil/ 2 @ 55 each	0	NA	Northeast ~550 feet/ Steam Plant OF#001 to Tennessee River	None
 Storage Yard	Drums	Steel/NA	N/NA	Visual observations through bung hole, under cover, some drums on spill pallet	New product oil and used oil/ ~12 @ 55 each	0-66	NA	Northeast ~480 feet/ Steam Plant OF#001 to Tennessee River	Some drums located on spill pallets; however, spill pallets are insufficient capacity.

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Storage Yard	Drum	Steel/NA	N/NA	Located on spill pallet	New product oil/ 2 @ 55 each	66	Unknown	Radial to ground surface	Located on spill pallet; however, spill pallet is insufficient capacity.
Used Cooking Oil									
 Clement Hall	AST	Steel/NA	N/NA	Visual Level Observation	Used Cooking Oil/300	0	2015	Radial to surrounding concrete and asphalt	None/Concrete
 Hess Hall	AST	Steel/NA	N/NA	Visual Leve Observation	Used Cooking Oil/300	0	Unknown	Radial to surrounding concrete and/or storm water drain	None/Concrete

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Rocky Top West Campus Dining Hall	AST	Steel/NA	N/NA	Visual Level Observation	Used Cooking Oil/300	0	2021	Under cover/Radial to concrete surface and floor drain	None/Concrete
 Sorority Village	AST	Steel/NA	N/NA	Visual Level Observation	Used Cooking Oil/300	0	Unknown	Radial to surrounding concrete and asphalt	None/Concrete
 Stokley Residence Hall	AST	Steel/NA	N/NA	Visual Level Observation	Used Cooking Oil/300	0	2017	Radial to surrounding concrete and asphalt and storm water drain	None/Concrete

Table 3-1
Facility Oil Storage Inventory

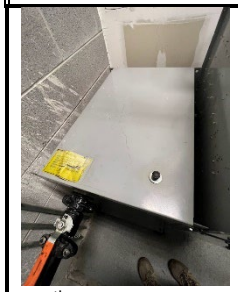
Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Student Union	AST	Steel/NA	N/NA	Visual Level Observation	Used Cooking Oil/300	0	2014	Covered/Radial to surrounding concrete	None/Concrete
Elevators									
 11th Street Parking Garage/Police Department Room 209	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/>55	>55	Unknown	Radial to surrounding floor	Building floor and walls
 Art and Architecture Room AA118	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

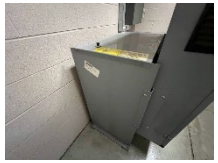
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Alumni Memorial Building Room 31	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/>55	>55	2000	Radial to surrounding floor	Building floor and walls
 Alumni Memorial Building Room 39	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/>55	>55	2000	Radial to surrounding floor	Building floor and walls
 Austin Peay Room B11A	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

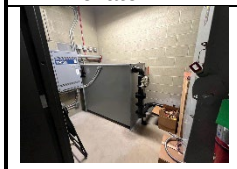
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Ayres Hall Room G001 Elevator #A	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/UK>55	>55	Unknown	Radial to surrounding floor	Building floor and walls
 Ayres Hall Elevator #3 Room G015	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/UK>55	>55	Unknown	Radial to surrounding floor	Building floor and walls
 Boat House	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/165	>165	Unknown	Radial to surrounding floor	Building floor and walls
(photo not available) Buehler Hall Room 204A	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

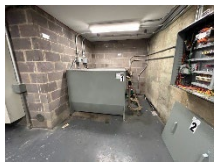
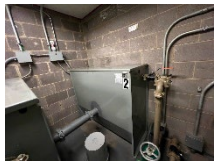
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Burchfiel Geography Building	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Absorbent pads and spill rags.	Hydraulic oil/175	>175	Unknown	Radial to surrounding floor	Building floor and walls
 Clarence Brown Theatre Reservoir 1	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Absorbent pads and spill rags.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls
 Clarence Brown Theatre Reservoir 2	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Absorbent pads and spill rags.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

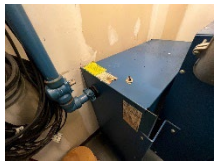
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Clarence Brown Theatre Reservoir 3	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Absorbent pads and spill rags.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls
 Claxton Education Building	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/165	>165	Unknown	Radial to surrounding floor	Building floor and walls
 Dabney Hall Elevator #1 Room 577	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

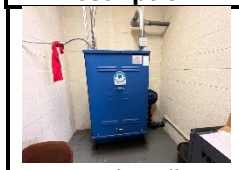
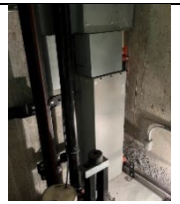
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Ferris Hall Room 209C	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls
 Fibers & Composites Manufacturing Facility & Egineering Annex Room 207-A	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/80	>80	Unknown	Radial to surrounding floor	Building floor and walls
 Fred Brown Residence Hall	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor.	Hydraulic Oil/>55	>55	2014	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

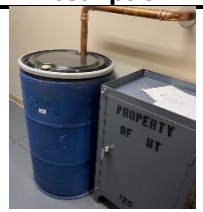
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Frieson Black Cultural Center Room 112	Drum	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor.	Hydraulic oil/55	>55	Unknown	Radial to surrounding floor	Building floor and walls
 Haslam Business Building Room 134	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/100	>100	Unknown	Radial to surrounding floor	Building floor and walls
 Hodges Library	Dock Lift Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor.	Hydraulic oil/>55	>55	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

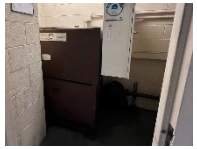
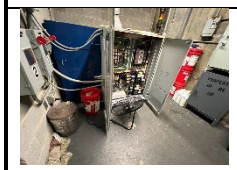
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Hodges Library Elevator Car 1	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/130	>130	Unknown	Radial to surrounding floor	Building floor and walls
 Lake Avenue Parking Garage Room 105	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/210	>210	Unknown	Radial to surrounding floor	Building floor and walls
 Lake Avenue Parking Garage Room 105	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor.	Hydraulic oil/210	>210	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

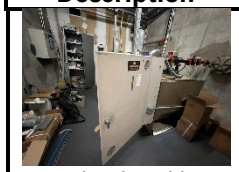
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Neyland Parking Garage – G10 Middle Unit 1	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/100	>100	Unknown	Radial to surrounding floor	Building floor and walls
 Neyland Parking Garage – G10 Middle Unit 2	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/100	>100	Unknown	Radial to surrounding floor	Building floor and walls
 Neyland Parking Garage – G10 West End Unit 3	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/100	>100	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

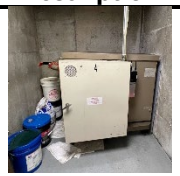
Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Neyland Parking Garage – G10 West End Unit 4	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/100	>100	Unknown	Radial to surrounding floor	Building floor and walls
 Neyland Thompson Sports Center	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/100	>100	Unknown	Radial to surrounding floor	Building floor and walls
 Nursing Education Building Room 117A1	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

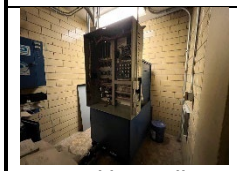
Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Panhellenic Building	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/200	>200	Unknown	Radial to surrounding floor	Building floor and walls
 Perkins Hall Room S004	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls
 Physical Education HPER – East Side Elevator #2	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/>55	>55	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Physical Education HPER – West Side Room 125 Elevator #1	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/200	>200	Unknown	Radial to surrounding floor	Building floor and walls
 South College	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls
 Student Recreational Center (TRECS) Room 113 Elevator 1	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/140	>140	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Student Recreational Center (TRECS) Room 025 Elevator 2	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/140	>140	Unknown	Radial to surrounding floor	Building floor and walls
 Student Recreational Center (TRECS) Room 297 Elevator 3	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/140	>140	Unknown	Radial to surrounding floor	Building floor and walls
 Taylor Law Unit 1 Room 45	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/100	>100	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Taylor Law Unit 2 Elevator Room	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/100	>100	Unknown	Radial to surrounding floor	Building floor and walls
 Taylor Law Unit 3 Room 31	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/200	>200	Unknown	Radial to surrounding floor	Building floor and walls
 Taylor Law Unit 4 Room 31	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/200	>200	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

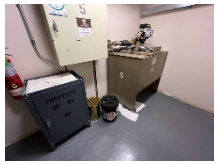
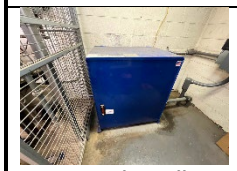
Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Taylor Law College Unit 5 Room 56	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/130	>130	Unknown	Radial to surrounding floor	Building floor and walls
 Temple Hall Room B006	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/125	>125	Unknown	Radial to surrounding floor	Building floor and walls
 Thompson Boling Arena Southeast	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/110	>110	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

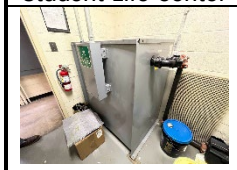
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Thornton Athletics Student Life Center	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/135	>135	Unknown	Radial to surrounding floor	Building floor and walls
 Walters Life Sciences Elevator # Room F-105A	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/90	>90	2000	Radial to surrounding floor	Building floor and walls
 Walters Life Sciences Elevator #2 Room M-110	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

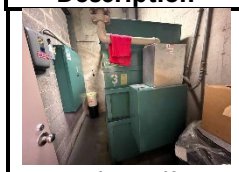
Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Walters Life Sciences Elevator #3 Room M208	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags and absorbent pads.	Hydraulic oil/90	>90	Unknown	Radial to surrounding floor	Building floor and walls
 Walters Life Sciences Dumpster Hydraulic	Hydraulic Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor.	Hydraulic oil/105	>105	Unknown	Radial to surrounding floor	Building floor and walls
 White Avenue Parking Garage	Elevator Reservoir	Steel/Steel	N/N	Visual observation, inspected yearly by outside contractor. Spill rags.	Hydraulic oil/ 2 @ 90 each	>90	Unknown	Radial to surrounding floor	Building floor and walls

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
Transformers									
 11th Street Parking Garage	Transformer Serial # Q577689TTT	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/265	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Allan Jones Aquatic Center	Transformer Serial # M05H12367	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/346	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Alumni Memorial Building	Transformer Serial # 3711402	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/467	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Alumni Memorial Building	Transformer Serial # 806002332	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/323	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Anderson Sports Training Center	Transformer Serial # 886008927	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/552	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Andy Holt Tower	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/220	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Andy Holt and Unvierstiy Extension Chiller East	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/458	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Andy Holt and Unvierstiy Extension Chiller West	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/458	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Art and Architecture	Transformer Serial # S390003	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/456	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Austin Peay	Transformer Serial # 2059000735	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/456	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Auxillary Services Building	Transformer Serial # 90349 KUB Owned	Steel/NA	N/NA	Visual observation	Mineral oil/ 384	NA	Unknown	Radial to surrounding ground.	Integral Containment/ Concrete Pad
 Ayres Hall	Transformer Serial # 8760089	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/540	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Brenda Lawson Athletic Center	Transformer Serial # 1259000080	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/349	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Burchfiel Geography Building	Transformer Serial # 0979001254	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/245	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Carousel Theatre	Transformer Serial # 9937007770	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/170	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Carriage House	Transformer Serial # 876008187	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/224	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Circle Park/Torchbearer	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/278	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Claxton Education Building Chiller	Transformer Serial # 9926000350	Steel/NA	N/NA	Visual Observation	Mineral Oil/652	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Claxton Education Building	Transformer Serial # 896011063	Steel/NA	N/NA	Visual Observation	Mineral Oil/349	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

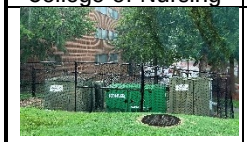
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Clement Hall	Transformer Serial # 0337013697	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/431	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Clement Hall	Transformer Serial # 916003796	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/353	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 College of Nursing	Transformer	Steel/NA	N/NA	Visual Observation	Mineral Oil/435	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 College of Nursing	Transformer	Steel/NA	N/NA	Visual Observation	Mineral Oil/549	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Communications & University Extension	Transformer	Steel/NA	N/NA	Visual Observation	Mineral Oil/353	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Dabney / Buehler Hall	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/516	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Dogwood Residence Hall	Transformer Serial # 1859000399	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/446	NA	2018	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Dougherty Engineering	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/341	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Dougherty Engineering	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/333	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Dougherty Engineering	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/>55	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Dougherty Engineering	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/>55	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Dunford Hall	Transformer Serial # 96005700	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/374	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Facility Services Complex	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/202	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Ferris Hall	Transformer Serial # 896008814	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/231	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Ferris Hall	Transformer Serial # 906000503	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/267	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Ferris Hall	Transformer Serial # 836005964	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/225	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Fibers & Composits Manufacturing Facility & Engineering Annes	Transformer Serial # 89091A1	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/450	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Fleet Management	Transformer Serial # 896008814	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/231	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad
 Fraternity Row Beta Theta Pi Delta Tau Delta Alpha Gamma Rho	Transformer Serial # F3639501	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/295	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Fraternity Row Phi Gamma Delta	Transformer Serial # F52K7804	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/114	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Fraternity Row Sigma Phi Eplison	Transformer Serial # F4165001	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/133	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Fraternity Row Phi Kappa Psi	Transformer Serial # F4165002	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/133	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Fraternity Row Sigma Alpha Epsilon Alpha Tau Omega	Transformer Serial # 0759001497	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/250	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Fraternity Row Beta Upsilon Chi Phi Kappa Alpha Sigma Nu	Transformer Serial # F3639502	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/295	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Fred Brown Residence Hall	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/640	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Frieson Black Cultural Center	Transformer Serial # 0137017498	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/209	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Geier Residence Hall	Transformer Serial # 1559002319	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/402	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Greve Hall	Transformer Serial # 906005849	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/332	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Haslam Business Building	Transformer Serial # N-650636	Steel/NA	N/NA	Visual observation	Mineral oil/350	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Henson Hall	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/265	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Hesler Biology Building	Transformer North	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/344	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Hesler Biology Building	Transformer South	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/473	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Hesler Chiller Building	Transformer Serial # 0437000257	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/344	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Hess Hall	Transformer Serial # 0237017317	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/221	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Hess Hall	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/602	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Hess Hall	Transformer Serial # 920326-A1	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/280	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Hodges Library	Transformer Serial # 9926001506	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/550	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

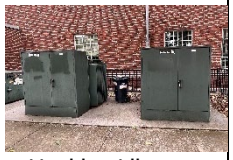
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Hodges Library	Transformer Serial # W290028	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/421	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Hoskins Library	Transformer Serial # 876008562 876008563	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/ 2 @ 487 each	NA	Unknown	Radial to surrounding concrete and ground	Integral Containment/ Concrete Pad
 Howard H. Baker	Transformer Serial # 0750001069	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/353	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container/ Pipe Material	Double-Walled Tank/ Piping	Good Engineering Practice	Contents/ Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction/ Receiver	Containment/ Diversion Structure
 Hummanites and Social Sciences Building/McClung Tower	Sub Transformer Serial # 1159001048	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/458	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Hummanites and Social Sciences Building Telephone Services	Sub Transformer Serial # PAW4715-0101	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/151	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Hummanites and Social Sciences Building/McClung Tower	Sub Transformer Serial # 11590001038	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/463	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Hummanites and Social Sciences Building/McClung Tower	Sub Transformer Serial # 1159001067	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/417	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 International House	Transformer Serial # 956000340	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/277	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Jessie Harris West Side	Transformer Serial # 876008469	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/387	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

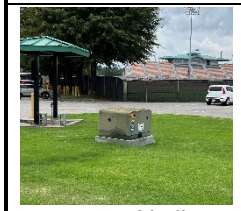
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Jessie Harris South Side	Transformer Serial # 876008468	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/487	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Joan Cronan Volleyball Practice Facility	Transformer Serial # 99672 KUB Owned	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/125	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Lee Softball Stadium	Transformer Serial # 71010	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/75	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Lee Softball Stadium	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/357	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Lee Softball Stadium	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/275	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Lindsey Nelson Stadium	Transformer Serial # 876001929	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/246	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Magnolia Residence Hall	Transformer Serial # 1859000387	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/446	NA	2018	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Massey Residence Hall	Transformer Serial # 96005890	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/350	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 McClung Museum	Transformer Serial # 989002533	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/350	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Melrose Hall	Transformer Serial # 936000868	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/389	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Min H. Kao Electrical Engineering	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/2@351	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Morrill Pump House	Transformer Serial # 9926001661	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/432	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Mossman	Transformer Serial # 1759000826	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/477	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Mossman	Transformer Serial # 1759000827	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/477	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Natalie Haslam Music Building	Transformer Serial # 0437017537	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/334	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Natalie Haslam Music Building	Transformer Serial # 1150013518	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/312	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Neyland Parking Garage G10 – East Side	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/158	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Neyland Parking Garage G10 – East Side	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/71	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Neyland Stadium Near Gate 21A	Transformer Serial # 966000817	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/565	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Neyland Stadium Near Gate 21A Concessions	Transformer Serial # 0650010948	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/367	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Neyland Stadium Gate 21A North Locker Room/Wolf-Kaplan	Transformer Serial # 0850002183	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/466	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Neyland Stadium North Jumbotron	Transformer Serial # 0650010746	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/245	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Neyland Stadium DAS Unit	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/ >55	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Neyland Stadium East Concesstions	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/275	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

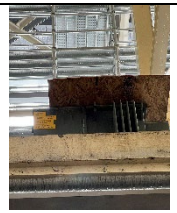
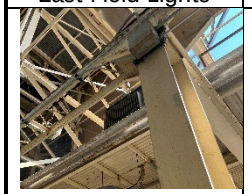
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Neyland Stadium East Sky Box and Elevator	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/651	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad
 Neyland Stadium East Field Lights	Transformer Serial # 0037000295	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/275	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad
 Neyland Stadium East Side Hall Gates 3 and 4	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/548	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

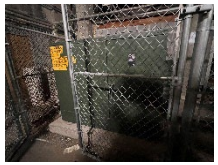
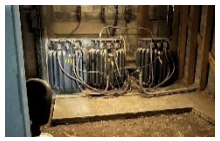
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Neyland Stadium East Gate 5	Transformer Serial # 0650010745 (out-of-service)	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/245	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad
 Neyland Stadium East Gate 5	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/ 3 @ 60 each	NA	Unknown	Radial to surrounding ground	NA
 Neyland Stadium South Gate 7	Transformer Serial # 06792	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/519	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Neyland Stadium South Gate 7	Transformer Serial # 0650010947	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/313	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad
 Neyland Stadium South Gate 7	Transformer (out-of-service)	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/295	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad
 Neyland Stadium South Jumbotron	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/ 350	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

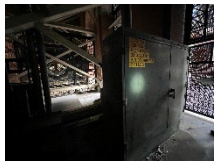
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Neyland Stadium West Skybox	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/589	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad
 Neyland Stadium West Field Lights	Transformer Serial # 0037008734	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/321	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad
 Neyland Stadium West Concessions	Transformer Serial # 870092-AL	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/260	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Neyland Thompson Sports Center	Transformer Serial # 0226001110	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/292	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Nursing Education Buidling	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/380	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Panhellenic Building	Transformer Serial # 876008186	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/224	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Parking Garage G10 West	Transformer Serial # 896007834	Steel/NA	N/NA	Visual observation	Mineral oil/245	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Perkins Hall	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/325	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Pratt Pavillion	Transformer Serial # 876011028	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/305	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Presidential Court	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/486	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Reese Residence Hall Chiller	Transformer Serial # 926002347	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/483	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Robinson Residence Hall	Transformer Serial # 1559002451	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/393	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

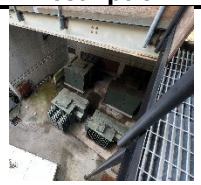
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Science and Engineering Research Facility (SERF)	Transformer Serial # 926002598 926002599	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/ 2 @ 408 each	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Science and Engineering Research Facility (SERF)	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/191	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Science and Engineering Research Facility (SERF)	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/333	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Senter Hall	Transformer Serial # 876008345	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/210	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Silverstein Luper Building (Former Hearing and Speech)	Transformer	Steel/NA	N/NA	Visual observation	Mineral oil/433	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Sorority Village	Transformer SOV 01 SOV 02 KUB Owned	Steel/NA	N/NA	Visual observation	Mineral Oil/ 2 @ 236 each	NA	Unknown	Radial to surrounding ground and concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

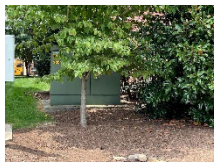
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Sorority Village	Transformer SOV 03 KUB Owned	Steel/NA	N/NA	Visual observation	Mineral Oil/ 236	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Sorority Village	Transformer SOV 04 KUB Owned	Steel/NA	N/NA	Visual observation	Mineral Oil/ 236	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Sorority Village	Transformer SOV 05 SOV 06 KUB Owned	Steel/NA	N/NA	Visual observation	Mineral Oil/ 1 @ 236 1 @ 331	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 South College	Transformer Serial # 866005410	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/300	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Steam Plant	Transformer Serial # 956001226 956001227	Steel/NA	N/NA	Visual observation	Mineral Oil/ 2 @ 521 each	NA	Unknown	Radial to surrounding concrete to storm water drains discharging to the Tennessee River via Outfall OF#001	Integral Containment/ Concrete Pad
 Steam Plant	Sub Transformer	Steel/NA	N/NA	Visual observation	Mineral Oil/ 2 @ 896 each	NA	Unknown	Radial to surrounding paved surface.	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Steam Plant	Transformer Serial # 1450006955	Steel/NA	N/NA	Visual observation	Mineral Oil/122	NA	Unknown	Radial to surrounding concrete to storm water drains discharging to the Tennessee River via Outfall OF#001	Integral Containment/ Concrete Pad
 Steam Plant	Transformer Serial # 966000412	Steel/NA	N/NA	Visual observation	Mineral oil/130	NA	Unknown	Radial to surrounding concrete to storm water drains discharging to the Tennessee River via Outfall OF#001	Integral Containment/ Concrete Pad
 Stokley Management Center	Transformer Serial # 0659002175	Steel/NA	N/NA	Visual observation	Mineral oil/502	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Stokley Management Center	Transformer Serial # 9926000274	Steel/NA	N/NA	Visual observation	Mineral oil/670	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Stokley Residence Hall	Transformer Serial # 1559002125 1559002113	Steel/NA	N/NA	Visual observation	Mineral oil/ 2 @ 647 each	NA	Unknown	Radial to surrounding paved surfaces and storm water drain.	Integral Containment/ Concrete Pad
 Storage Yard	Transformer (out-of-service)	Steel/NA	N/NA	Visual Observation	Mineral Oil/ >55	NA	Unknown	Radial to surrounding ground.	Integral Containment/ None

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Strong Hall	Transformer Serial # 1559001650	Steel/NA	N/NA	Visual Observation	Mineral Oil/431	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Strong Hall	Transformer Serial # 1559001662	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/431	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Student Health Center	Transformer 1059000857	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/412	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

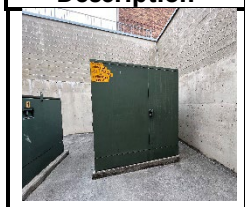
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Student Recreational Facility (TRECS)	Transformer Serial # 0126001763	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/650	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Student Union	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/750	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 Student Union	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/750	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Taylor Law Center North Side	Transformer Serial # 876008345	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/540	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Taylor Law Center South Side	Transformer Serial # 2974483495	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/475	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Temple Hall	Transformer Serial # 0137007063	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/169	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

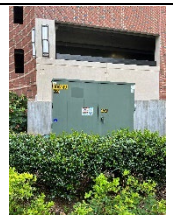
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Tennis Courts near HYPER	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/84	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Tennis Stadium	Transformer KUB Owned	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/236	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Terrace Avenue Garage	Transformer KUB Owned	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/>55	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Thompson Boling Area	Transformer Serial # 08590002145	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/954	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad
 Thompson Boling Area	Transformer Serial # C-45398-1-1 C-45398-1-2	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/ 2 @ 412 each	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad
 Thornton Athletics Center	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/255	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

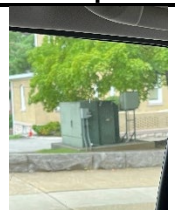
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Tyson Alumni Center	Transformer Serial # 906006053	Transformer	N/NA	Visual Level Observation	Mineral Oil/141	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 UT Warehouse	Transformer Serial # 47831 KUB Owned	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/384	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Volunteer Boulevard Parking Garage	Transformer Serial # 1550012426	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/179	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
Volunteer Hall Parking Garage — South Side	Transformer KUB Owned	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/540	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
Volunteer Hall Parking Garage — South Side	Transformer KUB Owned	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/384	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
Volunteer Hall Parking Garage — North Side	Transformer KUB Owned	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/540	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

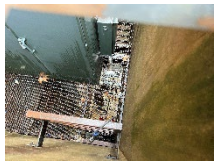
Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Walters Life Sciences South	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/600	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Walters Life Sciences North	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/600	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 West Campus Rocky Top Dinig Hall	Transformers Serial # 2050008478 2050008477	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/ 2 @ 214 each	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 West Campus Parking Garage Parking Garage G7	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/143	NA	Unknown	Radial to surrounding concrete	Integral Containment/ Concrete Pad
 White Avenue Parking Garage	Transformer	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/195	NA	Unknown	Radial to surrounding ground	Integral Containment/ Concrete Pad
 Zeanah Engineering Building	Transformers	Steel/NA	N/NA	Visual Level Observation	Mineral Oil/ 2 @ 449 each	NA	Unknown	Radial to surrounding paved surfaces	Integral Containment/ Concrete Pad

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
Underground Storage Tanks									
 Fleet Management	UST TDEC UST Tank ID 1356	Fiberglass Reinforced Plastic/Flex Plastic	Y/Y	Electronically monitored/ gauged	Gasoline/ 12,000	>12,000	9/22/1986	Radial to surrounding ground	NA
 Fleet Management	UST TDEC UST Tank ID 60487	Fiberglass Reinforced Plastic/Flex Plastic	Y/Y	Electronically monitored/ gauged	Gasoline/ 12,000	>12,000	1/15/2010	Radial to surrounding ground	NA
 Fleet Management	UST TDEC UST Tank ID 1358	Fiberglass Reinforced Plastic/Flex Plastic	N/Y	Automatic tank gauging	Used Oil/1,000	0	7/1/1992	Radial to surrounding ground	NA

Table 3-1
Facility Oil Storage Inventory

Location Description	Container Type	Container / Pipe Material	Double-Walled Tank / Piping	Good Engineering Practice	Contents / Capacity (gallons)	Secondary Containment Capacity (gallons)	Year Installed	Flow Direction / Receiver	Containment / Diversion Structure
 Kingston Pike Building Generator TDEC DUST Tank ID 58162	UST	Composite Steel with Fiberglass Reinforced Plastic/Flex Plastic	N/Y	Electronically monitored and gauged/Automatic Shutoff Device	Diesel/3,000	0	2004	Radial to surrounding ground	NA

Notes:

AST	=	Aboveground storage tank
N	=	No
Y	=	Yes
CLDS	=	Continuous leak detection system
NA	=	Not applicable
UST	=	Underground storage tank
TDEC	=	Tennessee Department of Environment and Conservation
DUST	=	

4.0 POTENTIAL SPILL PREDICTIONS, VOLUMES, RATES, AND CONTROL

112.7(b): Where experience indicates a reasonable potential for equipment failure (such as loading or unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of a discharge), include in your Plan a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each type of major equipment failure.

Table 3-1 lists the oil storage structures and the maximum volume (i.e., total container capacity) that could be released if a failure occurred. The worst-case spill rate is assumed to be an instantaneous release of the entire structure (i.e., rupture for bulk ASTs and totes, tip over for drums, and leakage or explosion for transformers).

Additionally, Table 3-1 establishes a direction of flow from the storage structures, should the secondary containment device (if present) hypothetically fail or be insufficient to handle the release.

Section 15 describes secondary containment considerations.

Figure 2 in Appendix A shows the overall facility layout and potential spill flow pathways.

5.0 DRAINAGE PREVENTION DIVERSIONARY STRUCTURES AND CONTAINMENT

112.7(c): Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in §112.1(b). The entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank or pipe, will not escape the containment system before cleanup occurs. In determining the method, design, and capacity for secondary containment, you need only to address the typical failure mode, and the most likely quantity of oil that would be discharged. Secondary containment may be either active or passive in design. At a minimum, you must use one of the following prevention systems or its equivalent:

(1) For onshore facilities:
- (i) Dikes, berms, or retaining walls sufficiently impervious to contain oil;
- (ii) Curbing or drip pans;
- (iii) Sumps and collection systems;
- (iv) Culverting, gutters, or other drainage systems;
- (v) Weirs, booms, or other barriers;
- (vi) Spill diversion ponds;
- (vii) Retention ponds; or
- (viii) Sorbent materials.

Except for areas noted in Section 15.2, areas in which oil is stored are equipped with appropriate containment and/or diversionary structures to prevent discharged oil from reaching a navigable watercourse. Table 3-1 lists the secondary containment/diversion structure for each SPCC Rules-regulated container/oil storage area at the facility.

In addition to dikes, drainage systems, or spill diversion structures, each oil loading/unloading area and oil storage structure will be within acceptable range of UTK Main Campus spill response equipment/personnel should a release occur. UTK Main Campus spill response training, procedures, equipment, and notification procedures are detailed in Sections 8 and 17.

UTK Main Campus will rely on its inspection and maintenance program, as well as spill response activities, for managing its transformers and any small diameter piping or hoses.

Consideration of Industry Standards

As a reference, the industry standards for "Impounding Around Tanks by Open Diking" and "Secondary Containment Tanks" are outlined in this section. These standards are generally incorporated into this SPCC Plan.

Industry Standard Consideration

Impounding Around Tanks by Open Diking (National Fire Protection Association [NFPA] 30-2021, Section 22.11.2)

(1) A slope of not less than 1 percent away from the tank shall be provided for at least 50 feet or to the dike base, whichever is less.

(2) The volumetric capacity of the diked area shall not be less than the greatest amount of liquid that can be released from the largest tank within the diked area, assuming a full tank.

(3) The outside base of the dike at ground level shall be no closer than 10 feet to any property line that is or can be built upon.

(4) Walls of the diked area shall be of earth, steel, concrete, or solid masonry designed to be liquid-tight and to withstand a full hydrostatic head.

(5) Where the average interior height of the walls of the diked area exceeds 6 feet, provisions shall be made for normal access; necessary emergency access to tanks, valves, and other equipment; and egress from the diked enclosure.

(6) Each diked area containing two or more tanks shall be subdivided, preferably by drainage channels or at least by intermediate dikes to prevent spills from endangering adjacent tanks within the diked area.

(7) Draining water from diked areas shall be controlled to prevent liquids from entering natural water resources, public sewers, or public drains.

(8) Storage of combustible materials, empty drums, full drums, or barrels shall not be permitted within the diked area.

Industry Standard Consideration

Secondary Containment Tanks (NFPA 30-2021, Section 22.11.4)

(1) Tank capacity should not exceed 50,000 gallons.

(2) Piping connections to the tank shall be made above the maximum liquid level.

(3) Means shall be provided to prevent the release of liquid from the tank by siphon flow.

(4) Means shall be provided for determining the liquid level of tank. Means shall be accessible to the delivery operator.

(5) Means shall be provided to prevent overfilling by sounding an alarm when the liquid level in tank reaches 90% capacity and automatically stopping delivery in the tank when liquid level reaches 95% capacity.

(6) Spacing between adjacent tanks shall not be less than 3 feet.

(7) Tank shall be capable of resisting the damage from the impact of a motor vehicle or collision barriers shall be provided.

(8) Where secondary containment is enclosed, it shall have appropriate emergency venting in accordance with Section 22.7.

(9) Secondary containment shall be designed to withstand the hydrostatic head resulting from a leak from the primary tank of the maximum amount of liquid that can be stored in the primary tank.

(10) Means shall be provided to establish the integrity of the secondary containment in accordance with Chapter 21 of NFPA 30-2021.

6.0 IMPRACTICALITY OF SECONDARY CONTAINMENT, 40 CFR 112.7(D)

112.7(d): If you determine that the installation of any of the structures or pieces of equipment listed in 40 CFR 112.7 (c) and (h)(1), and 112.8(c)(2), 112.8(c)(11), to prevent a discharge as described in 112.1(b) from any onshore or offshore facility is not practicable, you must clearly explain in your Plan why such measures are not practicable; for bulk storage containers, conduct both periodic integrity testing of the containers and periodic integrity and leak testing of the valves and piping; and, unless you have submitted a response plan under 112.20, provide in your Plan the following:

(1) An oil spill contingency plan following the provisions of 40 CFR 109.
(2) A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.

Areas of the facility where oil is handled or stored, except the cited deficiencies noted in other sections of this SPCC Plan, are equipped with appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching navigable water, as required by 40 CFR 112.7(c). As detailed in Section 1.3, it is not required that facilities demonstrate impracticality for containment of spills from OFOE, including transformers. Instead, the facility must be able to respond to a release of oil from this equipment with spill response equipment and have an adequate operation, maintenance, and inspection program in place to prevent releases. Spill response and absorbent materials will be used as the primary means of containment in these cases.

7.0 INSPECTION/RECORD KEEPING

112.7(e): Conduct inspections and tests required by 40 CFR 112 in accordance with written procedures that you or the certifying engineer develop for the facility. You must keep these written procedures and a record of the inspections and tests, signed by the appropriate supervisor or inspector, with the SPCC Plan for a period of three years. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

Although inspections may be performed more often, periodic inspections must be performed on all oil storage containers at the minimum frequencies indicated in Tables 7-1 and 7-2 to comply with industry standards. The Zone Maintenance Director or designee is responsible for conducting the inspections and completing and signing the appropriate forms. Section 15.6 provides further details regarding integrity assessments of the containers, which will be conducted according to industry standards for the facility's containers. Example inspection forms are in Appendix B to assist UTK Main Campus with the inspection requirements. Records of required inspections must be retained for at least 3 years at the facility.

Table 7-1
Routine[1] Inspection Schedule

Type of Inspection	Required Frequency	Responsible Person	Example Inspection Form[2]	Record Retention
Shop-Fabricated Aboveground Storage Tanks[3]				
External Visual (Routine)	Monthly and annually Per STI SP001-06	Zone Maintenance Director or designee	Appendix B	3 years
Aboveground Piping				
External Visual (Routine)	Monthly and annually	Zone Maintenance Director or designee	Appendix B	3 years
Portable/Mobile Containers (e.g., Drums, Totes)				
External Visual (Routine)	Monthly Per STI SP001-06	Zone Maintenance Director or designee	Appendix B	3 years
Oil-Filled Operational Equipment (Including Transformers)				
External Visual (Routine)	Annually	Zone Maintenance Director or designee	Appendix B	3 years
Spill Kits				
Check inventory to ensure adequate supply	Monthly	Zone Maintenance Director or designee	Appendix B	NA

Notes:

1 Routine inspections can be performed by qualified UTK/contractor personnel.

2 Facility-generated forms can be used in lieu of several of the example inspection forms listed above as long as they are complete.

3 Shop-fabricated tanks are not built to the American Petroleum Institute 653 industry standards and fall under the Steel Tank Institute Standard for the Inspection of Aboveground Storage Tanks (SP001-06) inspection requirements. Shop-fabricated tanks that are considered consumptive-use tanks (i.e., end-point tanks typically).

STI = Steel Tank Institute
SP001-06 = Standard for the Inspection of Aboveground Storage Tanks, Sixth Edition
NA = Not applicable

Table 7-2
Non-Routine[1] Inspection and Integrity Testing Schedule

Type of Inspection	Required Frequency	Responsible Person	Report	Record Retention
Steel Shop-Fabricated Tanks Over 5,000 gallons[2,3]				
Formal External Inspection including shell thickness measurements (tanks 5,001 to 50,000 gallons only)	Every 20 years STI SP001-06 (result of the inspection may result in repairs needed based on the suitability for continued service evaluation per Section 10); All repairs should be in compliance with SP031	Certified STI Inspector	Certified documentation	Indefinite (or 5 years after lifetime of equipment)
Follow-up External Inspection (for tanks repaired as a result of the 20-year formal external inspection)	Every 5 years STI SP001-06, Section 10.2.4	Certified STI Inspector	Certified documentation	Indefinite (or 5 years after lifetime of equipment)
Repair or remove from service following tank damage or leak STI SP001-06, Section 10.4; All repairs should be in compliance with SP031	Immediately	Zone Maintenance Director or designee	Certified documentation	Indefinite (or 5 years after lifetime of equipment)
Steel Shop-Fabricated Containers, 5,000 gallons or less, ASTs, and Portable/Mobile Containers				
Integrity Testing (Non-Routine)	None, as long as monthly and annual inspections performed and documented as required by STI SP001-06	NA	NA	NA

Notes:

[1] Non-routine inspections are performed by qualified/certified personnel in accordance with regulatory requirements and/or industry accepted standards.

[2] Required by industry standards, which the SPCC regulations require the engineer to consider.

[3] Steel shop-fabricated tanks are not built to the field-constructed tank industry standards and fall under STI SP001 inspection requirements.

STI = Steel Tank Institute
SP001-06 = Standard for the Inspection of Aboveground Storage Tanks, Sixth Edition
ASTs = Aboveground storage tanks
NA = Not applicable
SPCC = Spill, Prevention, Control, and Countermeasure
FTPI = Fiberglass Tank and Pipe Institute

Most ASTs, and all emergency generator belly tanks and mobile/portable oil storage containers at UTK Main Campus are classified as Category 1 systems with capacities less than or equal to 5,000 gallons. In accordance with Table 5.4 of Steel Tank Institute (STI) Standard for the Inspection of Aboveground Storage Tanks (SP001-06), periodic (monthly and annual) visual inspections by authorized UTK Main Campus personnel are the only type of integrity testing required for Category 1 systems. No periodic inspections by an STI inspector are required for these containers unless the monthly and annual inspections are not adequately documented.

The five 25,000-gallon diesel ASTs and two 20,000-gallon diesel ASTs are also classified as Category 1 systems; however, with capacities greater than 5,000 gallons. STI requires periodic (monthly and annually) visual inspections by authorized personnel and a formal external inspection by an STI-certified inspector every 20 years. Formal inspections are required to be documented and records maintained for the life of the tank.

7.1 Routine Visual Inspections

Table 7-1 addresses required routine visual inspections. The inspections listed in this table can be performed by qualified UTK Main Campus personnel or contractors. The Zone Maintenance Director or designee is required to regularly inspect all containers. These inspections should include observing oil tanks (including cooking oil), drum and tote storage/staging areas, loading/unloading, and transfer areas to identify evidence of leaks, spills, and signs of compromised integrity (e.g., plastic or metal fatigue, rusting, or bulging). All records must be kept on file for at least 3 years. If a deficiency is noted, it must be either described on the appropriate line or at the bottom of the inspection form reserved for remarks. Corrective action must then be taken to repair or replace a deficient container.

7.2 Non-Routine Inspections and Integrity Testing

Generally, Table 7-2 addresses minimum required integrity testing and non-routine inspections that must be performed by qualified inspectors (e.g., authorized American Petroleum Institute [API]- or STI-certified inspector). The integrity testing and inspections listed in this table must be performed in accordance with acceptable industry standards and/or regulatory requirements.

7.3 Inspection Authority Proof

Each routine inspection form is signed and dated by an appropriate supervisor or inspector as noted on the example inspection forms in Appendix B. When applicable, each non-routine inspection report is signed and certified by the authorized inspector (typically an authorized API- or STI-certified inspector).

7.4 Record Maintenance

As indicated by Tables 7-1 and 7-2, records of all routine inspections and integrity tests will be maintained for a minimum of 3 years. However, records of non-routine inspections and integrity tests will be maintained for 5 years after the operational life of the storage tank system or lifetime of the equipment. Inspection records are at the Facility Services Building.

8.0 PERSONNEL TRAINING AND SPILL PREVENTION PROCEDURES

8.1 Personnel Instructions

112.7(f)(1): At a minimum, train your oil-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan.

The Zone Maintenance Director will provide prevention, awareness, and response spill training to all new employees involved with oil equipment operation, maintenance, or oversight. Annual refresher training will be completed as well.

Spill Prevention, Control, and Countermeasure training topics for specific management/oil handlers include:

- Applicable pollution control laws, rules, and regulations
- Operation and maintenance of equipment to prevent oil discharges
- Purpose and overview of Spill Prevention, Control, and Countermeasure Plan
- Chemical and physical properties of materials transferred
- Potential spill areas and drainage routes
- Emergency response procedures
- Spill cleanup equipment locations and the use of the equipment
- Recent spill events, subsequent response and corrective action

Facility personnel involved in petroleum product handling attend sessions on safe-handling techniques, personal protection, and spill response. Spill response training is provided in conjunction with appropriate Occupational Safety and Health Administration and Resource Conservation and Recovery Act training programs at UTK Main Campus.

Intermediate training sessions are conducted for appropriate personnel when a process or procedure changes and for new employees who are responsible for implementing any portion of the SPCC Plan. Specific on-the-job training is provided as required by individual position. Annual refresher training and exercises are completed as well. Information may be conveyed via PowerPoint presentation, hand-outs, videos, or a combination therein.

Specific individuals designated as SPCC inspection personnel are also trained on what inspection procedures to use, the frequency of inspections, record keeping requirements, and procedures for reporting and correcting detected problems.

Example employee training record forms are in Appendix C.

8.2 Designated Person Accountable for Spill Prevention

112.7(f)(2): Designate a person at each applicable facility who is accountable for discharge prevention and who reports to facility management.

The Zone Maintenance Director is the designated person accountable for spill prevention at the UTK Main Campus facility.

8.3 Spill Prevention Briefings

112.7(f)(3): Schedule and conduct discharge prevention briefings for your oil-handling personnel at least once a year to assure adequate understanding of the SPCC Plan for that facility. Such briefings must highlight and describe known discharges as described in §112.1(b) or failures, malfunctioning components, and any recently developed precautionary measures.

UTK Main Campus will schedule and conduct safety meetings that include periodic review of spill prevention. UTK Main Campus must also conduct annual training that includes the following discussions: (1) recent spill events, (2) causes of the spills, and (3) corrective action to prevent recurrence of similar spills. If the facility has not experienced a recent spill, spill scenarios will be presented and discussed in order to detail specific actions to be taken under a given scenario and how actions may differ between scenarios. Personnel responsible for the oil storage areas/inspections and spill response personnel must be included in the SPCC briefings.

9.0 SITE SECURITY

112.7(g): Describe in your Plan how you secure and control access to the oil handling, processing and storage areas; secure master flow and drain valves; prevent unauthorized access to starter controls on oil pumps; secure out-of-service and loading/unloading connections of oil pipelines; and address the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges.

9.1 Fencing and Gates

Most of UTK's campus is open to the public; however, the Steam Plant and associated Storage Yard is fenced and closed after hours with limited access. Fenced areas include five 25,000-gallon diesel ASTs, two 20,000-gallon diesel ASTs, one 1,000-gallon diesel AST, one 250-gallon gasoline AST, and numerous 55-gallon drums of new product oil and used oil. Three 700-gallon inactive ASTs, as well as multiple inactive generators and transformers are also stored in this area. Fleet Management is locked after hours and limited to authorized personnel only during normal business hours.

9.2 Flow and Drain Valves Secured

The drainage valves from the secondary containment area for the two 20,000-gallon diesel ASTs and the five 25,000-gallon diesel ASTs at the Steam Plant will be kept locked in the closed position.

9.3 Starter Controls Secured

Fuel pumps at Fleet Management can only be accessed by authorized personnel using authorized gas cards. ASTs in the Storage Yard and Steam Plant are within a perimeter fence closed after hours. The transformers' and generators' access panels will be kept locked to limit access.

9.4 Pipeline Loading/Unloading Connections Secured

Piping at UTK Main Campus is in service; however, when facility piping is taken out of service or placed in standby for an extended period of time, connections will be secured.

9.5 Lighting Adequate to Detect and Deter Spills

Lighting within the buildings is adequate to detect a discharge from oil containers. Outside the buildings, security lighting is provided. Lighting at the facility is such that a spill may be observed during hours of darkness, both by operating personnel and non-operating personnel (general public, local police, etc.), and spills are deterred from occurring through acts of vandalism.

With the exception of Item 2 below, (because incandescent lighting is being phased out), lighting at UTK Main Campus generally conforms to the industry standard (API 2610, Section 13.2.2), which recommends the following:

Industry Standard Consideration

(1)	Use high-intensity discharge lamps, such as mercury vapor or high-pressure sodium lighting. High-pressure sodium lighting is recommended because it provides high lumen output per watt. Application of either of these two types of lamps at low temperatures should be referred to the manufacturer for special consideration.
(2)	Intersperse incandescent lighting fixtures in areas that require immediate return of lighting after power dips or outages. The use of instant re-strike lighting eliminates the need for interspersed incandescent lighting.
(3)	Consider photoelectric cell control where automatic switching of yard and rack lighting is required.
(4)	Lighting fixtures installed in Class I, Division 1 and 2, and Group D locations should conform to the requirements of NFPA 30 and 70, and be maintained in good condition.

10.0 LOADING/UNLOADING OPERATIONS

112.7(a)(3)(ii): Discharge prevention measures including procedures for routine handling of products (loading, unloading, and facility transfers, etc.)

Loading, unloading, and interfacility transfer of oil products occur at UTK Main Campus. Fuel for the ASTs, USTs, and emergency generator belly tanks is delivered to the facility by tanker truck on an as-needed basis. To fill the tank, the tanker truck is parked and chocked next to the tank. Before filling the tank, the truck should closely be inspected by the delivery driver for discharges at the lowermost drain and all outlets of the tanker. After the inspection, the tanker's discharge hose is attached to the inlet valve of the tank. This connection is outside a diked area; therefore, a bucket or absorbent material is placed under the connection to collect and contain any drips or leaks. The valve is normally in a closed and locked position. The Zone Maintenance Director or designated personnel must be notified and present to unlock and supervise the loading procedure.

Other virgin oil products are delivered in 55-gallon drums or 275/330-gallon totes by box trailer. Used oil is picked up by a third-party contractor for offsite recycling.

The facility does not have any "loading/unloading racks" as defined by the U.S. EPA standard and is not subject to the requirements of 40 CFR 112.7(c) and 40 CFR 112.8(b). Rule 40 CFR 112(h) does not apply to transfer of fuel to shop-fabricated, end-use containers such as small ASTs, nor does it apply to fuel transfer into non-AST systems by commercial fuel transporters. Oil throughput associated with these systems and operations is considered low. For these operations, spill risk potential is managed in accordance with standard operating procedures described throughout this SPCC Plan.

Industry Standard Consideration

All oil transporters are required to meet the minimum requirements and regulations established by the U.S. Department of Transportation. The basis for these regulations is listed in this section as an industry standard consideration.

Industry Standard Consideration

All transporters of oil to and from this facility should meet the minimum requirements and regulations established by the U.S. Department of Transportation (USDOT). Although not all of the oils transferred at the facility are hazardous substances, it is recommended that the USDOT rules for transferring hazardous materials be followed as a best management practice. Loading/unloading procedures of hazardous materials are detailed in 49 CFR 172 (tank truck transfer). Key aspects are excerpted below for consideration:

Tank Truck Transfer:

(1) A qualified person must be in attendance at all times when a tank truck is loaded/unloaded.
(2) The attendant must be awake, have an unobstructed view of the tank truck, and be within 25 feet of the tank truck throughout the event.
(3) The attendant (or surveillance attendant) must be aware of the nature of the hazardous materials to be loaded/unloaded, trained on the procedures to be followed in emergencies, authorized to move the tank truck, and have a means to move the cargo tank.
(4) Manholes and valves must be closed and secured during transport.

In addition, current processes for loading/unloading at UTK Main Campus need to meet the following NFPA requirements.

Industry Standard Consideration

An industry standard (Sections 28.4, 28.9, 28.10, and 28.11 of NFPA 30-2021) outlines the following loading/unloading operational guidelines that are applicable:

(1) Tank vehicle loading/unloading facilities should be separated from ASTs, buildings, and nearest property lines by a distance of 25 feet for Class I liquids and Class II and III liquids handled at temperatures at or above their flash points and 15 feet for Class II and III liquids handled at temperatures below their flash points.
(2) Loading/unloading facilities shall be provided with drainage systems or other means to contain spills.
(3) Before loading tank vehicles through open domes, a bonding connection shall be made to the vehicle or tank before dome covers are raised and shall remain in place until filling is completed and all dome covers have been closed or secured, unless one of the conditions of NFPA 30 Section 28.3.1 exists.
(4) When transferring Class I liquids or Class II or Class III liquids at temperatures at or above their flash points, engines of tank vehicles or motors of auxiliary or portable pumps shall be shut down during the making and breaking of hose connections.
(5) Equipment used for the transfer of Class I liquids between tanks shall not be used for Class II or Class III liquids, unless one of the conditions listed in NFPA 30 Section 28.10.1 exists.
(6) Liquids shall be loaded only into tanks whose material of construction is compatible with the chemical characteristics of the liquid (refer to Section 28.11 of NFPA 30-2021 for detailed loading/unloading guidelines).
(7) To prevent hazards due to a change in flash point of liquids, no tank car (rail) or tank vehicle that has previously contained a Class I liquid shall be loaded with a Class II or Class III liquid unless proper precautions are taken.

10.1 Adequate Secondary Containment for Loading and Unloading Racks

112.7(h)(1): Where loading/unloading rack drainage does not flow into a catchment basin or treatment facility designed to handle spills, use a quick drainage system for tank car or tank truck loading and unloading racks. You must design any containment system to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.

UTK Main Campus loading/unloading operations do not satisfy the intended U.S. EPA definition of "loading/unloading rack"; therefore, this section is *not applicable*. However, as also discussed in Section 15.2, means must be provided to prevent a catastrophic spill from the largest compartment of a commercial tank truck from entering the storm water drainage system. The facility is required to have "best management practices" in place for this process. Best management practices in place for loading/unloading activities include having operators present at all times during loading/unloading and placing wheel chocks on the tank trucks to prevent movement during loading/unloading activities.

10.2 Warning or Barrier System for Vehicles

112.7(h)(2) Provide an interlocked warning light or physical barrier system, warning signs, wheel chocks, or vehicle break interlock system in loading/unloading areas to prevent vehicles from departing before complete disconnection of flexible or fixed oil transfer lines.

UTK Main Campus loading/unloading operations do not satisfy the intended U.S. EPA definition of "loading/unloading rack"; therefore, this section is *not applicable*. However, it is common practice for drivers of tank trucks to use wheel chocks to prevent movement when loading fuel.

10.3 Vehicles Examined for Lowermost Drainage Outlets Before Leaving

112.7(h)(3) Prior to filling and departure of any tank car or tank truck, closely inspect for discharges the lowermost drain and all outlets of such vehicles, and if necessary, ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.

UTK Main Campus loading/unloading area does not satisfy the intended U.S. EPA definition of "loading/unloading rack"; therefore, this section is *not applicable*. However, it is general practice for the commercial tank truck driver to closely inspect the delivery truck for discharges at the lowermost drain and all outlets of the tanker prior to departure.

11.0 BRITTLE FRACTURE OR OTHER CATASTROPHE OF FIELD-CONSTRUCTED TANKS

112.7(i): If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure due to brittle fracture or other catastrophe or has discharged oil or failed due to brittle fracture failure or other catastrophe, evaluate the container for risk of discharge or failure due to brittle fracture or other catastrophe, and as necessary, take appropriate action.

There are no field-constructed tanks at the facility; therefore, this section is *not applicable*.

12.0 CONFORMANCE WITH OTHER APPLICABLE REQUIREMENTS

112.7(j): In addition to the minimal prevention standards listed under this section, include in your Plan a complete discussion of conformance with the applicable requirements and other effective discharge prevention and containment procedures listed in this part or any applicable more stringent State rules, regulations, and guidelines.

12.1 State of Tennessee Requirements

The State of Tennessee does not have any other requirements for spill prevention, control, and countermeasures. However, the State does have additional reporting requirements applicable to facilities with USTs and/or ASTs.

In Tennessee, spills that cannot be safely controlled or cleaned by facility personnel and/or that affect or threaten to affect navigable waters or adjoining shorelines must be reported to Tennessee Emergency Management Agency (TEMA) at 800-262-3300. Based on the information provided regarding the spill, TEMA will make the appropriate notifications to other agencies. However, UTK Main Campus is still legally responsible for making its own notifications. TEMA's phone number, along with that of other federal and state agencies, is in Table 17-2.

In addition, Tennessee Rules 0400-18-01-.05(4) and 68-215-127 require spills of 25 gallons or more to the environment to be reported to the Tennessee Department of Environment and Conservation (TDEC).[1] See Section 17 for more information.

12.2 Industry Standards

Discussions regarding conformance with the requirements of API, NFPA, STI standards, and other industry standards are integrated where applicable throughout this SPCC Plan. Additionally, NFPA 30 Flammable and Combustible Liquids Code specifies in Section 21.7.2.1, Identification for Emergency Responders, that a sign or marking that meets the requirements of NFPA 704 or another approved system be applied to storage tanks containing liquids. Section 21.7.2.2 of NFPA 30-2021 requires that unsupervised, isolated ASTs will be secured and marked to identify the fire hazards of the tank and the tank's contents to the public. Where necessary to protect the tank from tampering or trespassing, the area where the tank is located will be secured. EnSafe recommends that, if not already marked, UTK Main Campus mark each container accurately.

[1] A spill to the environment is defined in Section 17.3.2 of this Plan.

13.0 QUALIFIED OIL-FILLED OPERATIONAL EQUIPMENT

112.7(k): The owner or operator of a facility with oil-filled operational equipment that meets the qualification criteria in paragraph (k)(1) of this sub-section may choose to implement for this qualified oil-filled operational equipment the alternate requirements as described in paragraph (k)(2) of this sub-section in lieu of general secondary containment required in paragraph (c) of this section

1) Qualification Criteria-Reportable Discharge History: The owner or operator of a facility that has had no single discharge as described in §112.1(b) from any oil-filled operational equipment exceeding 1,000 U.S. gallons or no two discharges as described in §112.1(b) from any oil-filled operational equipment each exceeding 42 U.S. gallons within any twelve month period in the three years prior to the SPCC Plan certification date, or since becoming subject to this part if the facility has been in operation for less than three years (other than oil discharges as described in §112.1(b) that are the result of natural disasters, acts of war or terrorism); and
2) Alternative Requirements to General Secondary Containment. If secondary containment is not provided for qualified oil-filled operational equipment pursuant to paragraph (c) of this section, the owner or operator of a facility with qualified oil-filled operational equipment must:
   (i) Establish and document the facility procedures for inspections or a monitoring program to detect equipment failure and/or a discharge; and
   (ii) Unless you have submitted a response plan under §112.20, provide in your Plan the following:
      a) An oil spill contingency plan following the provisions of part 109 of this chapter.
      b) A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.

Electrical Transformers

SPCC Facility Layout drawings (Figures 6, 7, and 8) show the locations of pad-mounted transformers at the facility. Pole-mounted transformers typically contain less than 55 gallons of mineral oil and therefore are not addressed in this SPCC Plan. UTK Main Campus does not provide secondary containment for transformers due to electrical safety issues and design constraints. In lieu of general secondary containment, UTK Main Campus must establish and document procedures for inspections or a monitoring program to detect equipment failure and discharge. In addition, spill response materials must be readily available. Any leaks identified must be reported and corrected promptly. Refer to Appendix B for an example inspection log.

14.0 DRAINAGE CONTROL

14.1 Drainage from Diked Storage Areas

112.8(b)(1): Restrain drainage from diked storage areas by valves to prevent a discharge into the drainage system or facility effluent treatment system, except where facility systems are designed to control such discharge. You may empty diked areas by pumps or ejectors; however, you must manually activate these pumps or ejectors and must inspect the condition of the accumulation before starting, to ensure no oil will be discharged.

There are two concrete secondary containment dikes for the ASTs at the Steam Plant; one for the five 25,000-gallon diesel ASTs and one for two 20,000-gallon diesel ASTs. These areas drain to the storm sewer system. Discharge from the containment areas will be inspected prior to draining to confirm no oil is present.

14.2 Valves Used on Diked Storage Areas

112.8(b)(2): Use valves of manual, open-and-closed design, for the drainage of diked areas. You may not use flapper type drain valves to drain diked areas. If your facility drainage drains directly into a watercourse and not into an onsite wastewater treatment plant, you must inspect and may drain uncontaminated retained storm water, as provided in 112.8(c)(3)(ii), (iii), and (iv).

The secondary containment areas at the Steam Plant utilize manual, open-and-closed design drainage valves which remain in the closed position when draining activities are not occurring.

14.3 Facility Drainage Systems from Undiked Areas

112.8(b)(3): Design facility drainage systems from undiked areas with a potential for a discharge (such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding.

Spills from tanks with secondary containment are unlikely; however, an active inspection and spill response program incorporating storm drain covers and absorbents will be utilized to prevent oil that could be accidentally spilled during transfers or discharged from failed transformers, from entering the storm sewer system.

Spill kits containing spill control equipment (absorbent pads, granules, booms [socks], etc.) will be near the fuel storage tanks and readily available in the event of a spill or leak. If warranted, an emergency response contractor will be notified for large spills.

14.4 Final Discharge of Drainage

112.8(b)(4): If facility drainage is not engineered as in 112.8(b)(3), equip the final discharge of all ditches inside the facility with a diversion system that would, in the event of an uncontrolled discharge, retain oil in the facility.

If active containment methods using absorbents fail, oil discharged at some parts of UTK Main Campus could enter the storm sewer system and discharge into the Tennessee River/Fort Loudoun Lake. If a spill should occur on the property that could not be contained onsite with spill materials

including absorbents, pads, and socks, the Zone Maintenance Director would contact the spill consultant. The spill consultant would identify the appropriate actions to clean the spill, including the use of an emergency response spill contractor. Facility storm water drainage and drainage from undiked areas is also discussed in Sections 2.4 and 14.3.

14.5 Facility Drainage Systems and Equipment

112.8(b)(5): Where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two "lift" pumps and permanently install at least one of the pumps. Whatever techniques you use, you must engineer facility drainage systems to prevent a discharge as described in §112.1(b) in case there is an equipment failure or human error at the facility.

There are no drainage water treatment units at the facility; therefore, this section is *not applicable*.

15.0 BULK STORAGE CONTAINERS/SECONDARY CONTAINMENT

15.1 Container Compatibility with its Contents

112.8(c)(1): You must not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature.

The oil storage containers used onsite are made of a material (i.e., steel, plastic) that is compatible with the storage containers' contents (e.g., fuel, oil); therefore, the tanks conform to the relevant industry standard (NFPA 30-2021 Flammable and Combustible Liquids Code). Reference Table 3-1 for container content/capacity, container material, and good engineering (e.g., liquid level gauges). Oil storage containers at UTK Main Campus are designed to operate under ambient atmospheric conditions for pressure and temperature.

15.2 Diked Area Construction and Containment Volume for Storage Containers

112.8(c)(2): You must construct all bulk storage container installations (except mobile refuelers and other non-transportation-related tank trucks) so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond.

There are two diked areas at UTK Main Campus; however, only the dike with five 25,000-gallon ASTs at the Steam Plant use a dike as the primary means of secondary containment. Although the two double-walled 20,000-gallon diesel ASTs are in a dike, double-walled construction is the primary means of secondary containment.

Diked oil-containing structures exposed to direct precipitation are required to have secondary containment with capacity for the entire tank, plus sufficient freeboard to allow for precipitation. The required freeboard depth to use for precipitation calculations is not defined in the SPCC regulation. Although the U.S. EPA indicates that a 25-year/24-hour storm event standard is appropriate for most facilities and protective of the environment, it was not made a rule standard because of the difficulty and expense for some facilities.

A 25-year/24-hour storm event for the facility area in Knoxville, Tennessee, is approximately 5.03 inches of rain. This information is found in the "Precipitation Frequency Data Server(National Oceanic and Atmospheric Administration, National Weather Service) and online at https://hdsc.nws.noaa.gov/hdsc/pfds/index.html.

The general industry standard for secondary containment is 110% of tank capacity to provide for 10% freeboard to contain precipitation. This latter standard (i.e., the 110% rule) is applied in this SPCC Plan; however, the 5.03-inch rainfall is also considered.

15.2.1 Freeboard Determination

Based on the 110% rule, the concrete diked secondary containment area for the five 25,000-gallon diesel ASTs should be sufficient capacity to hold 27,500 gallons (diesel from one tank plus storm water). The secondary containment consists of a concrete dike measuring approximately 50 feet x 88 feet x 1.6 feet (shortest height of dike wall).

110% capacity = 25,000 gallons x 1.1 = 27,500 gallons
Dike capacity = 50 feet x 88 feet x 1.6 feet = 7,000 cubic feet = 52,000 gallons

Based on these calculations, the containment dike meets the 110% rule (i.e., 52,000 gallons is greater than 27,500 gallons).

Freeboard capacity = 52,000 – 25,000 = 27,000 gallons
Freeboard height = 27,000 gallons / 7.48 gallons per cubic feet / (50 feet x 88 feet) = 0.82 feet = 9.8 inches

Based on these calculations, the containment dike has sufficient freeboard for the 25-year/24-hour storm event (i.e., 9.8 inches is greater than 5.03 inches).

15.2.2 Adequacy of Secondary Containment

Oil storage containers 55 gallons and greater must have adequate secondary containment. Most oil storage containers at UTK Main Campus have adequate secondary containment. The Steam Plant building stores 55-gallon drums of new product oil and used oil within a concrete curbing area provides secondary containment. The five 25,000-gallon ASTs at the Steam Plant have secondary containment in the form of diking. In addition to double-walled construction, the two 20,000-gallon diesel ASTs are in a concrete secondary containment dike. One 250-gallon gasoline double-walled AST is in the Storage Yard. One 500-gallon diesel AST associated with Walters Academic Building and one 400-gallon diesel AST associated with Neyland Stadium are both double-walled and partially under cover. The transformers do not require additional secondary containment. Elevator oil reservoirs are located within buildings. The Fleet Management area contains a 250-gallon motor oil AST within secondary containment, a 250-gallon double-walled used oil AST within a building, and 55-gallon drums on spill pallets under cover.

Oil containers with inadequate secondary containment include the six 300-gallon used cooking oil ASTs that appear to be single-walled and undiked. Numerous 55-gallon drums at the Storage Yard area are not equipped with adequate secondary containment. Two 55-gallon drums at Fleet Management are also not equipped with adequate secondary containment. A weld of the double-walled 1,000-gallon diesel AST in the Storage Yard is broken resulting in loss of secondary containment.

Refer to the facility oil storage inventory in Table 3-1 for secondary containment details. The Executive Summary provides a summary of regulatory deficiencies related to secondary containment.

15.2.3 Impermeability of Secondary Containment

Secondary containment structures at the facility are constructed of steel, plastic, and concrete. These materials are sufficiently impermeable to retain oil stored in the primary container if the primary container were to fail for some reason.

15.3 Diked Area, Inspection, and Drainage of Rainwater

112.8(c)(3): You must not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open watercourse, lake, or pond, bypassing the facility treatment system unless you:

(i) Normally keep the bypass valve sealed closed.
(ii) Inspect the retained rainwater to ensure that its presence will not cause a discharge as described in §112.1(b).
(iii) Open the bypass valve and reseal it following drainage under responsible supervision.
(iv) Keep adequate records of such events, for example, any records required under permits issued in accordance with 40 CFR 122.41(j)(2) and 40 CFR 122.41(m)(3).

The diked area around the five 25,000-gallon diesel ASTs at the Steam Plant discharges through a direct connection to the storm sewer with a lockable manual valve. The valve will be left locked in the closed position when not in use. After rain events, storm water in the diked area will be inspected prior to discharging to the storm sewer.

A diked area is provided around the two 20,000-gallon diesel ASTs at the Steam Plant with a valve connection to the storm sewer that will remain in the closed position. After rain events, storm water in the diked area will be inspected prior to discharging to the storm sewer.

15.4 Corrosion Protection and Leak Testing of Buried Metallic Storage Tanks

112.8(c)(4): You must protect any completely buried metallic storage tank installed on or after January 10, 1974, from corrosion by coatings or cathodic protection compatible with local soil conditions. You must regularly leak test such completely buried metallic storage tanks.

There are no buried metallic tanks at the facility; therefore, this section is *not applicable*.

15.5 Corrosion Protection of Partially Buried Metallic Tanks

112.8(c)(5): You must not use partially buried or bunkered metallic tanks for the storage of oil, unless you protect the buried section of the tank from corrosion. You must protect partially buried and bunkered tanks from corrosion by coatings or cathodic protection compatible with local soil conditions.

There are no buried metallic tanks at the facility; therefore, this section is *not applicable*.

15.6 Aboveground Tank Periodic Integrity Assessment

112.8(c)(6): You must test or inspect each aboveground container for integrity on a regular schedule, and whenever you make material repairs. You must determine, in accordance with industry standards, the appropriate qualifications for personnel performing tests and inspections, and the frequency and type of testing and inspections, which take into account container size, configuration, and design (such as containers that are: shop-built, field-erected, skid-mounted, elevated, equipped with a liner, double-walled, or partially buried). Examples of these integrity tests include, but are not limited to visual inspection, hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or other systems of non-destructive testing. You must keep comparison records and you must inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices satisfy the recordkeeping requirements of this paragraph.

40 CFR 112.8(c)(6) directs the engineer to recommend integrity testing based on industry standards. Industry standards set integrity testing requirements (based upon AST type, size, installation, contents, corrosion rate, and previous inspection history) and determine a schedule of applicable inspections for each AST. For the tanks at UTK Main Campus, STI Standard for the Inspection of Aboveground Storage Tanks (STI SP001-06) industry standard applies. The standard applies to steel tanks and portable containers. The aboveground storage containers at UTK Main Campus are constructed of steel.

Oil containers at the facility are subject to monthly visual inspections for external integrity, adequate secondary containment, pipe and pipe connection integrity, and other related equipment using the inspection checklists in Appendix B. Inspections records will be maintained by the Zone Maintenance Director. Integrity testing will be conducted as presented in Table 7-2.

Inspections are required to be documented and records maintained onsite for 3 years. Formal inspections by an STI inspector should be maintained 5 years past the life of the tank.

Example inspection forms in Appendix B provide checklists that can be used during a typical visual inspection of a shop-fabricated tank. The fundamental components of the inspection are as follows:

- Structural integrity
- Attached piping
- Secondary containment
- Security

15.6.1 Shop-Fabricated Containers up to 5,000 gallons

Most oil storage containers at the facility are classified as STI SP001-06 "Category 1" systems that are less than 5,000 gallons. In accordance with Table 5.5 of STI SP001-06, periodic (monthly and annual) visual inspections by the facility are the only type of integrity testing required for these containers. No periodic inspections by an STI inspector are required for these containers unless the monthly and annual inspections are not adequately documented.

15.6.2 Shop-Fabricated Steel Aboveground Storage Tanks 5,001 to 50,000 gallons

The diesel ASTs are the only shop-fabricated tanks that fall into this size category and are classified as Category 1 systems greater than 5,000 gallons. In accordance with Table 5.5 of STI SP001-05, a formal external inspection by a certified STI inspector is required every 20 years for these tanks. In addition, periodic (monthly and annual) visual inspections are required for these tanks. Section 10.2.4 of STI SP001-05 stipulates that if the formal external inspection of a tank in this category determines that structural repairs are needed, a follow-up external inspection every 5 years will be required.

Additional Inspections Required to Follow-Up

Section 10.3.1 of STI SP001-06 stipulates that if any tank is found to have microbial influenced/induced corrosion, repairs must be promptly made and a follow-up formal external or internal inspection must be made no more than 2 years after the discovery of the corrosion. If structural repairs are needed, a follow-up formal external/internal inspection every 5 years will be required.

Section 10.3.6.2 of STI SP001-06 states that if the tank has been exposed to a fire, natural disaster, excessive settlement, overpressure, or damage from cracking, the tank must be evaluated by an engineer experienced in AST design or by a tank manufacturer who will, jointly with the owner, determine if an immediate formal internal or external inspection is required. If a tank is exposed to fire or other means that could cause possible damage, it must be inspected by a certified inspector for serviceability and leaks before being put back into service. Consult with the tank manufacturer before making any alterations or repairs of leaks to a tank.

Section 10.4 of STI SP001-06 requires that a tank be taken out of service if a leak is found. The tank must then be repaired, replaced, or closed and removed from service in accordance with good engineering practices.

Required Integrity Testing for Future Shop-Fabricated ASTs and Requirements for Installation, Material Repair, and Recommissioning

For any new shop-fabricated tanks that may be installed in the future, UTK Main Campus should obtain certification of integrity testing from the manufacturer or installer before placing the tank into service. Likewise, if there is a material (significant) repair of any tank, the integrity of the tank must be tested by an appropriate method before the tank is returned to service.

15.6.3 Record Maintenance

Inspections must be documented and records maintained for at least 3 years by the Zone Maintenance Director, or designee, performing the inspections. Some inspection records must be maintained for the life of the equipment plus 5 years. Tables 7-1 and 7-2 summarize required inspection and testing requirements for primary oil-containing structures at UTK Main Campus.

15.7 Control of Leakage through Internal Heating Coils

112.8(c)(7): You must control leakage through defective internal heating coils by monitoring the steam return and exhaust lines for contamination from internal heating coils that discharge into an open watercourse, or pass the steam return or exhaust lines through a settling tank, skimmer, or other separation or retention system.

No tanks at the facility are equipped with internal heating coils; therefore, this section is *not applicable.*

15.8 Liquid-Level Sensing Devices

112.8(c)(8): You must engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:

(i) High liquid-level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities, an audible air vent may suffice.
(ii) High liquid-level pump cutoff devices set to stop flow at a predetermined container content level.
(iii) Direct audible or code signal communication between the container gauger and the pumping station.
(iv) A fast response system for determining the liquid-level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.
(v) You must regularly test liquid-level sensing devices to ensure proper operation.

Liquid Level Sensing Devices

UTK Main Campus uses multiple means to determine liquid level in oil storage containers, including manual gauging to electronic level indicators. The large tanks at the Steam Plant (i.e., 20,000- and 25,000-gallon diesel ASTs) are equipped with a continuous leak detection system (i.e., Yokogawa DCS).

The Storage Yard has one 250-gallon gasoline AST and one 1,000-gallon diesel AST that are manually gauged for levels. Fleet Management has a 250-gallon motor oil AST and 250-gallon used oil AST that are manually gauged for levels. Manual gauging is employed for oil drums and used cooking oil ASTs.

Protection against tank overfill is achieved by (1) awareness of available tank capacity and inventory, (2) careful monitoring (either manually or automatically), and (3) control of product movement. At a minimum, direct audible or code signal communication between the container gauge and the individual transferring liquid is required.

Testing of Liquid Level Devices

At a minimum, visual gauges will be tested annually by manual gauging to confirm the visual gauge's accuracy. The level monitoring system must be regularly tested to ensure the operational performance of the liquid level sensing devices.

Industry Standard Consideration

All gauging equipment, detector instrumentation, and related systems should be inspected and tested annually, at a minimum, as outlined in NFPA 30-2021.

15.9 Observation of Disposal Facilities for Effluent Discharge

112.8(c)(9): You must observe effluent treatment facilities frequently enough to detect possible system upsets that could cause a discharge as described in §112.1(b).

UTK Main Campus does not have an onsite wastewater treatment plant; therefore, this section is *not applicable*.

15.10 Visible Oil Leak Corrections from Tank Seams and Gaskets

112.8(c)(10): You must promptly correct visible discharges which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts. You must promptly remove any accumulations of oil in diked areas.

Visible oil leaks from oil storage systems will be identified during the monthly visual inspections that are completed in accordance with Table 7-1 and example forms in Appendix B. Additionally, operational personnel will be trained and instructed to notify a supervisor and the Zone Maintenance Director if these conditions are observed. The Zone Maintenance Director is responsible for requesting a cleanup contractor to remove any spilled oil from the facility, and if needed, ensuring the tank seams or gaskets are repaired promptly.

Knoxville Utility Board will be contacted to repair any observed utility-owned leaking transformers.

15.11 Appropriate Position of Mobile or Portable Oil Storage Containers

112.8(c)(11) You must position or locate mobile or portable oil storage containers to prevent a discharge as described in §112.1(b). Except for mobile refuelers and other non-transportation-related tank trucks, you must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.

Table 3-1 includes drum and tote oil storage containers that are in use at UTK Main Campus and also lists the general means and adequacy of containment.

The 55-gallon drums of petroleum-based liquids (hydraulic fluid, lubricant oil, etc.) at the Steam Plant main building and Fleet Management are located on concrete floors inside buildings or under cover; most drums are located on spill pallets or within concrete curbing providing additional secondary containment.

The 55-gallon drums associated with the Steam Plant and Storage Yard sheds are located under cover with open walls, stacked on top of each other in multiple locations on concrete floors or on gravel surfaces with no additional secondary containment.

16.0 FACILITY TRANSFER OPERATIONS, PIPING, AND PUMPING

16.1 Buried Piping Installation Protection and Examination

112.8(d)(1): Provide buried piping that is installed or replaced on or after August 16, 2002, with a protective wrapping and coating. You must also cathodically protect such buried piping installations or otherwise satisfy the corrosion protection standards for piping in 40 CFR 280 or a state program approved under 40 CFR 281. If a section of buried line is exposed for any reason, you must carefully inspect it for deterioration. If you find corrosion damage, you must undertake additional examination and corrective action as indicated by the magnitude of the damage.

In 2009, two 20,000-gallon diesel ASTs were installed as a backup fuel source for the Steam Plant. The buried piping is carbon steel carrier piping with carbon steel casing with cathodic protection provided.

16.2 Not-In-Service and Standby Service Terminal Connections

112.8(d)(2): Cap or blank-flange the terminal connection at the transfer point and mark it as to origin when piping is not in service or is in standby service for an extended time.

UTK Main Campus has no piping considered "not-in-service or on standby"; therefore, this section is *not applicable*.

16.3 Pipe Supports Design

112.8(d)(3): Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.

The five 25,000-gallon diesel ASTs at the Steam Plant have aboveground piping runs from the tanks to the plant which are attached to piping supports. The piping supports have been designed and constructed in accordance with good engineering practice to minimize the potential for abrasion and corrosion and to allow for expansion and contraction.

16.4 Aboveground Valve and Pipeline Examination

112.8(d)(4): Regularly inspect all aboveground valves, piping, and appurtenances. During the inspection you must assess the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. You must also conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement.

A short run of coated carbon steel piping runs from the five 25,000-gallon diesel ASTs at the Steam Plant. Table 7-1 in Section 7 indicates requirements for routine and periodic inspections of aboveground piping. Routine inspections of valves, piping, hoses, and appurtenances can be inspected using the inspection form in Appendix B to look for leaks, misalignment, vibration, supports, corrosion, and miscellaneous items. Operational personnel will be trained and instructed to notify the SPCC contacts listed in Section 2.2 any time leaks or signs of deterioration are observed.

16.5 Aboveground Piping Protection from Vehicular Traffic

112.8(d)(5): Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.

Piping at the Steam Plant is protected from vehicular traffic due to placement. Piping is at heights above vehicular traffic or within areas protected by building structures.

17.0 SPILL RESPONSE AND REPORTING PROCEDURES

SAFETY WARNING

Spilled fuel constitutes a fire and explosion hazard with the threat to human life and destruction of property. Petroleum vapors are also hazardous to personnel due to anesthetic and toxic concentrations below explosive levels. Volatile fuel may cause skin irritation if allowed to remain on the skin (e.g., soaked gloves and/or clothing). Personnel safety and protection of life and environment take precedence over property protection. If there is a threat to personnel safety, the local Fire Department should be the first official agency notified. Special precautions should be exercised when handling diesel or gasoline.

17.1 Spill Control Equipment and Materials

UTK Main Campus has adequate discharge response capability, equipment, and personnel to contain any discharge at the facility. UTK Main Campus provides spill response equipment in several locations within and around the facility. Various pieces of equipment such as front end loaders, back hoes, shovels, rakes, brooms, etc. are available for use in the event of a spill.

The following spill response equipment and materials are available onsite at UTK Main Campus

- Adsorbent Pads and Booms
- Adsorbent Granules
- Oil Emulsifier
- Shovels/Rakes
- Front End Loader
- 55-gallon Drums
- Two-way Radios
- Cellular Phones

All members of the Spill Response Team, as well as other authorized UTK Main Campus personnel, use cellular phones for internal communications. In-plant telephone are also available for facility personnel to contact members of the Spill Response Team to report spills. Due to the close proximity of operational areas and the established internal communications system, it is possible for the staff to be dispatched to the location of a spill in a timely manner and for a spill kit to be nearby.

Additionally, UTK Main Campus will contact the spill consultant if additional support is required by an outside discharge response contractor to respond to releases and control releases.

17.2 Discharge Notifications

UTK Main Campus personnel who identify an oil spill or release are instructed to notify the Spill Response Coordinator or UTK Police via cellular phones or internal telephone lines. Spill-related emergency contacts are made on many levels, primarily local and regional.

Table 17-1 provides a prioritized telephone contact list. Notification will include the following (if known): amount and type of oil spilled, the source of the discharge, and the time the event occurred. When reporting a spill, include the information in the Response Notification Form in Appendix D.

Table 17-1
Emergency Notification Phone List

Prioritized Contact List	Response Role	Day Phone	24 Hour Phone
Initial Contact Derek Bailey, Zone Maintenance Director	Contact Qualified Individual	865-659-6377	865-946-7777
Facility Qualified Individual/Incident Commander Name: Garrett Ferry Coordinator III Response Time: 1 Hour	Facility Qualified Individual Incident Command and Control	854-805-4007	865-946-7777
Facility Qualified Individual/Incident Commander Name: Brian Gard UTK Director of Emergency Management	Facility Qualified Individual	865-974-9347	865-974-9586
UTK Environmental Health and Safety	Incident Reporting	865-974-5084	865-974-9586 757-876-5386 (Sandra Prior – EHS Director)
Tennessee Emergency Management Agency	Incident Reporting, RQ Spill, notifier of federal and state agencies	800-262-3300	800-262-3300
National Response Center	Receiver of all reports of spills to waters of the U.S., or potential to affect waters.	800-424-8802	800-424-8802
City of Knoxville Fire Department Station #9 Response Time: 15 Minutes	Emergency Medical Fire suppression support	911 865-595-4480	911
Knoxville-Knox County Emergency Management Agency Point of Contact: Colin Ickes – Director	Incident Reporting, RQ Spill	865-215-1177	865-215-1177
Tennessee Department of Environment and Conservation (Knoxville Environmental Field Office)	RQ Spill, NPDES, Storm Water Permits	865-594-6035	865-594-6035
U.S. EPA Region 4, Emergency Response Branch (24-hour)	Spill prevention or spill response information	404-562-8700	404-562-8700
UTK Campus Police	Traffic Control Evacuation Crowd Control	911 865-974-3114	911 865-947-3114
Knox County Sheriff's Department	Traffic Control Evacuation Crowd Control	911 865-215-2243	911 865-215-2243
Knoxville Police Department	Traffic Control Evacuation Crowd Control	911 865-215-7450	911 865-215-7450
Hospital UT Medical Center 1924 Alcoa Highway Knoxville, Tennessee 37920	Medical Support	911 865-305-9000	911 865-305-9000
Ambulance Service AMR	Ground Ambulance Service	911 865-573-5779	911 865-573-5779
UT Lifestar	Helicopter Ambulance Service	865-305-9112	865-305-9112

Table 17-1
Emergency Notification Phone List

Prioritized Contact List	Response Role	Day Phone	24 Hour Phone
CHEMTREC — Technical Support	Hazardous chemical response advice and manufacturer/ supplier referral/notifications	800-424-9300	800-424-9300
EnSafe (Spill Consultant)	Provide response expertise Provide 3rd party spill response contractor for cleanup activities.	615-255-9300, but 888-590-8885 if an emergency	888-590-8885
CHEMTREC Referral Center (non-emergency)	Technical Support	800-262-8200	800-262-8200

Notes:
RQ = reportable quantity
NPDES = National Pollutant Discharge Elimination System
U.S. EPA = United States Environmental Protection Agency

17.3 Spill Response Procedures

A prompt and adequate response to any spill of petroleum at the UTK Main Campus is mandatory. Regardless of the size or scope of the spill, all releases should be reported to Zone Maintenance Director. If the spill is large and cannot immediately be stopped (i.e., by shutting off a machine, closing a valve, etc.), the initial action to be taken by the individual discovering the spill should be to evacuate the area.

The general response procedure is outlined in the following subsections. Spill response procedures and initial contacts are also summarized in the Red Plan at the back of this SPCC Plan.

17.3.1 Procedures for Individual Who Discovers Spill

An employee who discovers a spill will:

- Ensure employee safety.
- Briefly assess the severity of the spill, determining the extent and nature of the event.
- Report spills of any size that cannot be contained or cleaned up by onsite personnel, and/or that affects or threatens to affect navigable waters or adjoining shorelines using the contacts in Table 17-1. Report location of occurrence, type of occurrence, and if it involves injuries.

17.3.2 Procedures for Spill Response Personnel

The steps outlined below will be followed:

1. Determine if the spill represents a release to the environment.

   a. A **release** means any spilling, leaking, pumping, pouring, escaping, leaching, or disposing into the environment.

   b. The **environment** is defined as:

      - The navigable waters of the United States.
      - Any other surface water, ground water, drinking water supply, land surface, or subsurface strata, or ambient air within the United States.
      - The Knoxville storm sewer or wastewater treatment plant via the sanitary sewer.

   c. **Any release that gets outside of a building or outside of an impervious containment area should be considered a release to the environment.**

2. Determine if the quantity of material spilled represents a harmful (or reportable) quantity.

   A **harmful (reportable) quantity** of oil is defined as that which:

   a. Violates applicable water quality standards.

   b. Causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines, or a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

   c. Enters the storm sewer system.

   d. Includes a spill of 25 gallons or more to the environment.

   e. Includes all spills that affect or threaten to affect navigable waters or adjoining shorelines.

3. Refer to Table 17-1, Emergency Notification List, to identify actions to take and agency(ies) to contact when a spill of oil occurs.

   Information to be provided orally when reporting a spill includes the following:

   a. Time of the spill.

   b. Identity of the material spilled.

   c. Approximate quantity spilled.

   d. Location and source of the spill.

   e. Cause and circumstances of the spill.

   f. Existing or potential hazards (fire, explosion, etc.), if any.

   g. Personal injuries or casualties, if any.

   h. Corrective action being taken and an approximate timetable to control, contain, and clean up spill.

   i. Name(s) and telephone number(s) of individual(s) who discovered and/or reported the spill.

   j. Other unique or unusual circumstances.

4. For any spill of petroleum leaving the property and entering a drainage canal or storm drain, IMMEDIATELY NOTIFY:

   Tennessee Division of Water Resources
   Knoxville Environmental Field Office
   3711 Middlebrook Pike
   Knoxville, Tennessee 37921
   865-595-6035

Following cleanup, ensure that the appropriate written reports are completed, and if necessary, submitted to governing regulatory agencies. See Section 18.

For small spills (i.e., those that do not place personnel at risk for exposure above the permissible exposure limits), facility personnel may be directed by the Zone Maintenance Director to initiate containment/cleanup. Appropriate personal protective equipment will be donned and the proper cleanup materials (i.e., booms, absorbents, etc.) utilized. Spent absorbent materials should be placed in appropriate containers (i.e., drums kept with the spill kits) for disposal offsite. All waste products generated by spill cleanup will be managed per applicable local, state, and federal regulations. All equipment used during spill cleanup operations should be immediately replaced in the spill kit to maintain inventory. The Zone Maintenance Director will inspect the area post-cleanup to verify that efforts were sufficient and that waste was properly packed for offsite disposal.

The Zone Maintenance Director should be contacted immediately if a large oil/hazardous materials release occurs. Large spill cleanup may be handled by a third-party emergency response contractor as coordinated by the spill consultant. Contact information is in Table 17-1.

If a large spill occurs, efforts should be made to prevent oil/hazardous materials from reaching storm drains, Outfall 001, or Fort Loudon Lake/Tennessee River or permeating into the ground which could contaminate groundwater. While these efforts are underway, the Zone Maintenance Director will contact the spill consultant. The spill consultant has contracts with three emergency response contractors for statewide response activities. An emergency response contractor will be called to respond, when appropriate. The following steps should be taken in the event of a large release:

- Determine a spill is occurring.
- Immediately notify Zone Maintenance Director.
- The Zone Maintenance Director contacts the spill consultant and notifies appropriate/applicable local/state/federal agencies.
- When appropriate, the spill consultant contacts a third-party emergency response contractor.
- An area ahead of the spill should be diked prior to the arrival of the emergency response contractor to contain the spill onsite (whenever possible).
- The contractor will remediate the spill, under the supervision of facility personnel.

18.0 WRITTEN SPILL REPORT GUIDELINES

This section addresses written spill reporting requirements for onshore facilities and for internal record keeping requirements.

18.1 Amendment of Spill Prevention, Control, and Countermeasure Plans by Regional Administrator

112.4(d) Amend your Plan, if, after review by the Regional Administrator of the information you submit under paragraph (a) of this section, or submission of information to EPA by the State agency under paragraph (c) of this section, or after onsite review of your Plan, the Regional Administrator requires that you do so. The Regional Administrator may require you to amend your Plan if he finds that it does not meet the requirements of this part or that amendment is necessary to prevent and contain discharges from your facility.

(e) Act in accordance with this paragraph when the Regional Administrator proposes by certified mail or by personal delivery that you amend your SPCC Plan. If the owner or operator is a corporation, he must also notify by mail the registered agent of such corporation, if any and if known, in the State in which the facility is located. The Regional Administrator must specify the terms of such proposed amendment. Within 30 days from receipt of such notice, you may submit written information, view, and arguments on the proposed amendment. After considering all relevant material presented, the Regional Administrator must either notify you of any amendment required or rescind the notice. You must amend your Plan as required within 30 days after such notice, unless the Regional Administrator, for good cause, specifies another effective date. You must implement the amended Plan as soon as possible, but no later than six months after you amend your Plan, unless the Regional Administrator specifies another date.

According to 40 CFR 112.4, UTK Main Campus is required to report a spill event to the regional administrator of U.S. EPA if the spill meets either of the criteria shown at right. The owner or operator of the facility will submit a written report **within 60 days** of the date of the spill. The following information must be provided in the report:

U.S. EPA Spill Event Criteria

1. Greater than 1,000 gallons of oil into or upon the navigable water of the United States or adjoining shorelines in a single spill event.

OR

2. More than 42 gallons of oil in each of two discharges occurring within any 12-month period.

- Name of the facility.
- Name of person reporting spill.
- Location of the facility.
- Maximum storage or handling capacity of the facility and normal daily throughput.
- Corrective action and countermeasures taken, including a description of equipment repairs and replacements.

- An adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary.

- The cause of such discharge as described in §112.1(b), including a failure analysis of the system or subsystem in which the failure occurred.

- Additional preventive measures taken or contemplated to minimize the possibility of recurrence.

- Such other information as the Regional Administrator may reasonably require pertinent to the SPCC Plan or discharge.

This information will be submitted to the U.S. EPA at the following address:

U.S. EPA Region 4
Regional Administrator
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303-8960
404-562-9900

A complete copy of all information provided to the Regional Administrator will also be sent within 5 days to the TDEC, Division of Water Resources at the following address:

Tennessee Division of Water Resources
Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, Tennessee 37921
865-595-6035

If required by the Regional Administrator after his review of the spill event information or an onsite review of the SPCC Plan, UTK Main Campus will amend its SPCC Plan. UTK Main Campus will amend the SPCC Plan within 30 days after receipt of notice from the Regional Administrator, unless the Regional Administrator, for cause, specifies another effective date. UTK Main Campus will implement the amended SPCC Plan as soon as possible, but not later than 6 months after SPCC Plan amendment, unless the Regional Administrator specifies another date.

18.2 State Agency Report

UTK Main Campus is required to report any spill event of 25 gallons or more to TDEC Division of Water Resources within 72 hours if it meets any of the following criteria:

- "violates applicable water quality standards, or
- causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines," or
- Includes any spill of 25 gallons or more to the environment (Tennessee Rules 0400-18-01-.05(4) and 68-215-127).

In addition, spills of any amount that cannot be contained or cleaned up by onsite personnel and/or affect or threaten to affect navigable waters require notification of TEMA. Within 15 days of a reportable event, submit a written report to:

Tennessee Emergency Management Agency
3041 Sidco Drive
Nashville, Tennessee 37204

18.3 Internal Spill Report

Any spill requiring emergency cleanup should be logged for internal record keeping, using the Response Notification Form, in Appendix D. The report should be completed by the facility representative who led the emergency response. Spill reports should be kept on file for at least 3 years following the event. In addition, copies of all written spill reports are to be submitted to the Department of General Services Environmental Compliance Manager via email to Laura.Waynick@tn.gov or via mail to following address:

Laura Waynick, Environmental Compliance Manager
Department of General Services
Tennessee Tower, 24th Floor
312 Rosa L. Parks Avenue
Nashville, Tennessee 37243

Appendix A
Facility Diagrams

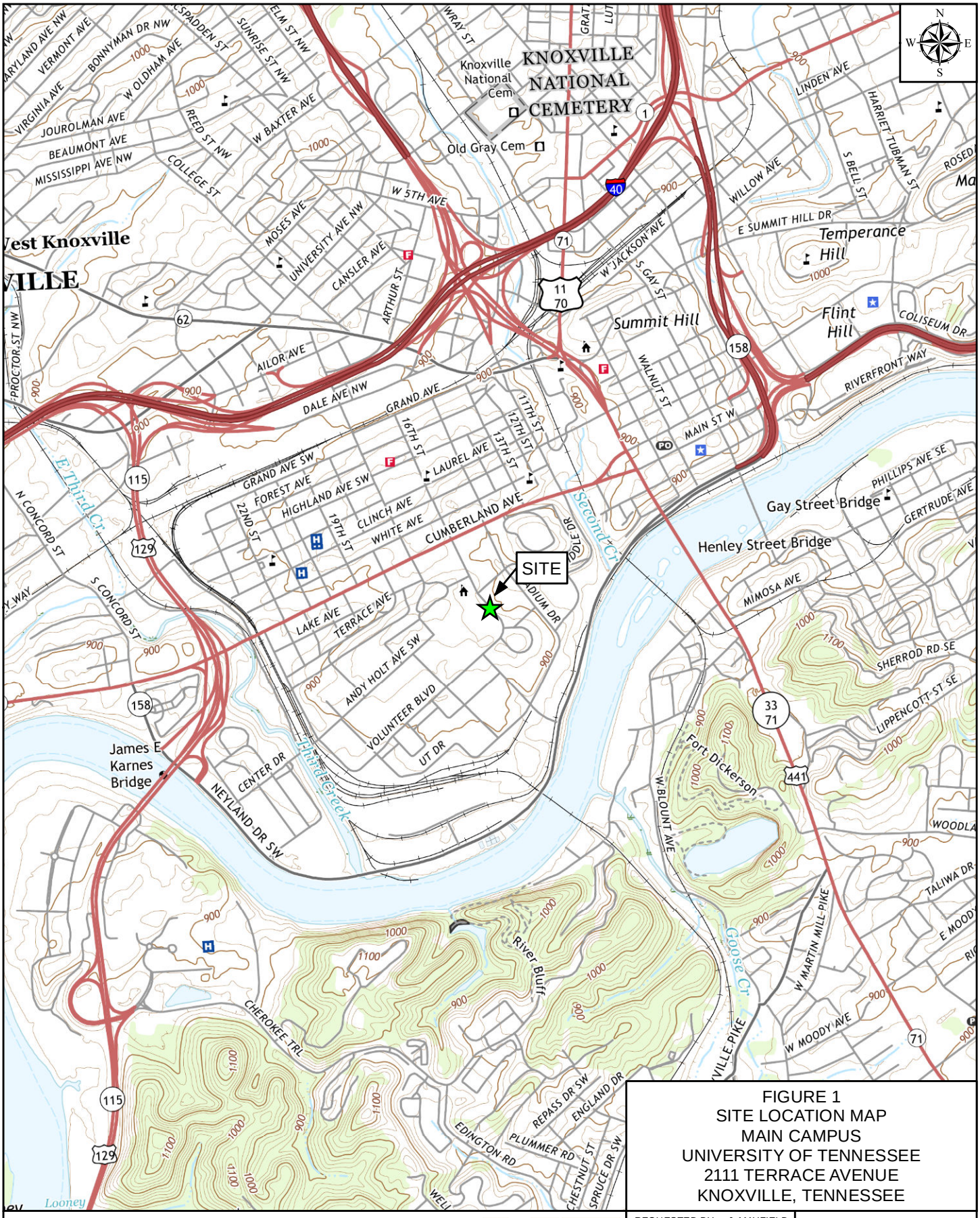


FIGURE 1
SITE LOCATION MAP
MAIN CAMPUS
UNIVERSITY OF TENNESSEE
2111 TERRACE AVENUE
KNOXVILLE, TENNESSEE

LEGEND

★ SITE LOCATION

REQUESTED BY:	J. MAYFIELD
DRAWN BY:	N. RINEHART
DATE:	8/23/2022
PROJECT NO:	0888821830
PITTS NO:	UT.540.009

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X:\DGS\UT_Campus\UT_Campus_SiteLocationMap.mxd

Data Source: U.S. Geological Survey. Maryville Quadrangle, Tennessee [map]. Photorevised 2016. 1:24,000. 7.5 Minute Series.

Main Campus - West

Main Campus - North

Institute of Agriculture
Campus Has Seperate
SPCC Plan

Main Campus - South

0 175 350 700 1,050 1,400 1,750
Feet

LEGEND

- TOTE (1)
- ABOVEGROUND STORAGE TANK (AST) (19)
- UNDERGROUND STORAGE TANK (UST) (4)
- DIESEL GENERATOR (52)
- DRUM STORAGE (7)
- ELEVATOR (52)
- NATURAL GAS (2)
- TRANSFORMER (171)
- FLOW DIRECTION
- RAILROAD
- ROADS
- WATER FEATURES
- BUILDING
- CONSTRUCTION AREA (1)

JOB NO.	0888821830
PITTS NO.	UT.540.009
DRAWN BY:	N. RINEHART
DATE:	9/28/2022
REVIEWED BY:	T. ESTES
SCALE:	1 " = 350 '

Department of General Services

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THE UNIVERSITY OF TENNESSEE KNOXVILLE

FIGURE 2
SPCC FACILITY LAYOUT

MAIN CAMPUS - OVERVIEW MAP
UNIVERSITY OF TENNESSEE
2111 TERRACE AVENUE
KNOXVILLE, TENNESSEE

X:\DOS\UT_Campus\UT_Campus_SiteMap.mxd

Data Source: Base layers provided by University of Tennessee and modified by EnSafe.

LEGEND

- ABOVEGROUND STORAGE TANK (AST) (6)
- DIESEL GENERATOR (35)
- DRUM STORAGE (1)
- ELEVATOR (HYDRAULIC OIL RESERVOIR) (42)
- NATURAL GAS (1)
- OUTFALL (3)
- TRANSFORMER (MINERAL OIL) (114)
- FLOW DIRECTION
- RAILROAD
- ROADS
- WATER FEATURES
- BUILDING

Generator 500-Gallon Diesel
Drain
Generator 360-Gallon Diesel
Reservoirs 2 @ 90-Gallons Each
Generator 5,040-Gallon Diesel
Generator 300-Gallon Diesel
Generator 400-Gallon Diesel
Reservoir 80-Gallon
Generator 300-Gallon Diesel
AST 300-Gallon Used Cooking Oil
Generator 366-Gallon Diesel
Reservoirs 2 @ 200-Gallons Each
Reservoir 200-Gallon
Reservoirs 2 @ 100-Gallons Each
Reservoir 130-Gallon
Generator Unknown Capacity Diesel
Generator 546-Gallon Diesel
Generator 366-Gallon Diesel
Reservoir >55-Gallon
Generator 150-Gallon Diesel
AST 300-Gallon Used Cooking Oil
Generator 3,460-Gallon Diesel
Generator 950-Gallon Diesel
AST for Generator 500-Gallon Diesel
Reservoirs 3 @ 90-Gallons Each
Reservoir 105-Gallon (Dumpster)
Reservoir 175-Gallon
Reservoir 90-Gallon
Reservoir 2 @ >55-Gallons Each
Drain
Generator 300-Gallon Diesel
Reservoir >55-Gallon
Reservoir 90-Gallon
Reservoir 90-Gallon
Generator 2,000-Gallon Diesel
Generator 140-Gallon Diesel
Reservoir 90-Gallon
Drum New Product Petroleum Storage
Generator 660-Gallon Diesel
Reservoirs 2 @ 210-Gallons Each
Generator 408-Gallon Diesel
Generator 300-Gallon Diesel
Generator 500-Gallon Diesel
Reservoir >55-Gallon
Reservoir 130-Gallon
Reservoir 100-Gallon
Generator 366-Gallon Diesel
Generator 800-Gallon Diesel
Generators 2 @ 300-Gallons Each Diesel
Reservoir 165-Gallon
Reservoir >55-Gallon
Reservoir 90-Gallon
Reservoir 90-Gallon
Reservoir 90-Gallon
AST 300-Gallon Used Cooking Oil
Reservoir 90-Gallon
Generator 2,000-Gallon Diesel
Generator 300-Gallon Diesel
Generator 300-Gallon Diesel
Generator 200-Gallon Diesel
Generator 350-Gallon Diesel
Generator 300-Gallon Diesel
Generator 6,610-Gallon Diesel
AST 300-Gallon Used Cooking Oil
Reservoir >55-Gallon
Reservoirs 3 @ 90-Gallons Each
Generator 526-Gallon Diesel
Generator 650-Gallon Diesel
AST for Generator 400-Gallon Diesel
Generator 2,703-Gallon Diesel
Reservoir 90-Gallon
Reservoir 200-Gallon
Reservoir 125-Gallon
Generator 700-Gallon Diesel
Generator Natural Gas
Reservoir >55-Gallon
Reservoir 165-Gallon

0 75 150 300 450 600 750 Feet

Data Source: Base layers provided by University of Tennessee and modified by EnSafe.

JOB NO.	0888821830
PITTS NO.	UT.540.009
DRAWN BY:	N. RINEHART
DATE:	10/3/2022
REVIEWED BY:	T. ESTES
SCALE:	1 " = 150 '

Department of General Services

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THE UNIVERSITY OF TENNESSEE KNOXVILLE

FIGURE 3
SPCC FACILITY LAYOUT
MAIN CAMPUS - NORTH
UNIVERSITY OF TENNESSEE
2111 TERRACE AVENUE
KNOXVILLE, TENNESSEE

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FIGURE 4
SPCC FACILITY LAYOUT

MAIN CAMPUS - WEST
UNIVERSITY OF TENNESSEE
2111 TERRACE AVENUE
KNOXVILLE, TENNESSEE

THE UNIVERSITY OF TENNESSEE KNOXVILLE

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TN Department of General Services

JOB NO.	088882183
PITTS NO.	UT-540.009
DRAWN BY:	N. RINEHART
DATE:	9/28/2022
REVIEWED BY:	T. ESTES
SCALE:	1" = 200'

LEGEND

- ABOVEGROUND STORAGE TANK (AST) (12)
- UNDERGROUND STORAGE TANK (UST) (3)
- DIESEL GENERATOR (10)
- DRUM STORAGE (6)
- ELEVATOR (HYDRAULIC OIL RESERVOIR) (10)
- OUTFALL (7)
- TOTE (1)
- TRANSFORMER (MINERAL OIL) (41)
- FLOW DIRECTION
- RAILROAD
- ROADS
- WATER FEATURES
- BUILDING

Generator 366-Gallon Diesel
AST 250-Gallon Used Oil
UST (Registered with DUST) 12,000-Gallon Gasoline
Drum Storage 55-Gallon Used Oil
UST 1,000-Gallon Used Oil
UST (Registered with DUST) 12,000-Gallon Gasoline
Reservoirs 3 @ 145-Gallons Each
Generator 315-Gallon Diesel
Generator 315-Gallon Diesel
Drum Storage on Spill Pallets New Product
AST in Secondary Containment 250-Gallon Motor Oil
Reservoir 135-Gallon
Generator 1,726-Gallon Diesel
AST 300-Gallon Used Cooking Oil
Generator 946-Gallon Diesel
Drain
Generator 420-Gallon Diesel
Reservoir 100-Gallon
Generator 2,500-Gallon Diesel
Drum Storage 6 @ 55-Gallons Each New Product 3 @ 55-Gallons Each Used Oil
Reservoirs 2 @ 100-Gallons Each
Reservoirs 2 @ 100-Gallons Each
Reservoir 110-Gallon
Generator 660-Gallon Diesel
Generator 172-Gallon Diesel
Single-Walled ASTs in Secondary Containment 5 @ 25,000-Gallons Each Diesel
Drum Storage 2 @ 55-Gallons Each Product Oil
Single-Walled ASTs in Secondary Containment 2 @ 20,000-Gallons Each Diesel
Drum Storage 6 @ 55-Gallons Each New Product 6 @ 55-Gallons Each Used Oil
Drum Storage 2 @ 55-Gallons Each New Product 1 @ 55-Gallons Each Used Oil
Tote 275-Gallon Used Oil
Storage Yard Inactive Storage Area
7 @ ~100-Gallons Each Diesel Generators
3 @ 700-Gallons Each ASTs
1 Pad-Mounted Transformer
Multiple Pole-Mounted Transformers
AST 250-Gallon Gasoline
AST 1,000-Gallon Diesel
Generator 195-Gallon Diesel

0 75 150 300 450 600 750 Feet

JOB NO.	0888821830
PITTS NO.	UT.540.009
DRAWN BY:	N. RINEHART
DATE:	9/28/2022
REVIEWED BY:	T. ESTES
SCALE:	1 " = 150 '

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THE UNIVERSITY OF TENNESSEE KNOXVILLE

FIGURE 5
SPCC FACILITY LAYOUT

MAIN CAMPUS - SOUTH
UNIVERSITY OF TENNESSEE
2111 TERRACE AVENUE
KNOXVILLE, TENNESSEE

X:\DOSSIUT_Campus\DOP_UT_Campus_SiteMap_Final.mxd

Data Source: Base layers provided by University of Tennessee and modified by EnSafe.

LEGEND

- ABOVEGROUND STORAGE TANK (AST) (6)
- DIESEL GENERATOR (35)
- DRUM STORAGE (1)
- ELEVATOR (HYDRAULIC OIL RESERVOIR) (42)
- NATURAL GAS (2)
- OUTFALL (3)
- TRANSFORMER (MINERAL OIL) (114)
- FLOW DIRECTION
- RAILROAD
- ROADS
- WATER FEATURES
- BUILDING

JOB NO.	0888821830
PITTS NO.	UT.540.009
DRAWN BY:	N. RINEHART
DATE:	9/30/2022
REVIEWED BY:	T. ESTES
SCALE:	1 " = 150 '

Department of General Services

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THE UNIVERSITY OF TENNESSEE KNOXVILLE

FIGURE 6
SPCC FACILITY LAYOUT

MAIN CAMPUS - NORTH TRANSFORMERS
UNIVERSITY OF TENNESSEE
2111 TERRACE AVENUE
KNOXVILLE, TENNESSEE

0 75 150 300 450 600 750 Feet

Data Source: Base layers provided by University of Tennessee and modified by EnSafe.

X:\DOS\UT_Campus\SOP_UT_Campus_SiteMap_Final.mxd

FIGURE 7
SPCC FACILITY LAYOUT

MAIN CAMPUS - WEST TRANSFORMERS
UNIVERSITY OF TENNESSEE
2111 TERRACE AVENUE
KNOXVILLE, TENNESSEE

THE UNIVERSITY OF TENNESSEE KNOXVILLE

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JOB NO.	088882183
PITTS NO.	UT.540.009
DRAWN BY:	N. RINEHART
DATE:	9/28/2022
REVIEWED BY:	T. ESTES
SCALE:	1" = 200'

JOB NO.	0888821830
PITTS NO.	UT.540.009
DRAWN BY:	N. RINEHART
DATE:	9/28/2022
REVIEWED BY:	T. ESTES
SCALE:	1 " = 150 '

TN Department of General Services

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THE UNIVERSITY OF TENNESSEE KNOXVILLE

FIGURE 8
SPCC FACILITY LAYOUT

MAIN CAMPUS - SOUTH TRANSFORMERS
UNIVERSITY OF TENNESSEE
2111 TERRACE AVENUE
KNOXVILLE, TENNESSEE

Data Source: Base layers provided by University of Tennessee and modified by EnSafe.

Appendix B
Example Inspection Forms

SHOP-FABRICATED AST, GENERATOR, HYDRAULIC OIL RESERVOIRS, AND USED COOKING OIL CONTAINER INSPECTION CHECKLIST

Instructions: Complete routine external visual inspection of shop-fabricated ASTs (i.e., typically consumptive-use tanks), diesel-fueled electrical generators, pad-mounted electrical transformers, hydraulic oil reservoirs, and used cooking oil containers. Notify Zone Maintenance Director immediately if any significant deficiencies are identified.

Industry Standard Consideration: STI SP001-06
Frequency: Annually

Tank/Container, Date: _____ Inspector: _____

	YES	NO	NA	CAR	Comments
FOUNDATION AND SUPPORTS					
Free of settling or washout?	☐	☐	☐	☐	
Concrete pad or ring wall free of cracking and spalling?	☐	☐	☐	☐	
Tank supports in satisfactory condition?	☐	☐	☐	☐	
Water able to drain away from tank?	☐	☐	☐	☐	
Is the grounding strap in good condition?	☐	☐	☐	☐	
Is the tank shell free of signs of coating failure?	☐	☐	☐	☐	
TANK SHELL, HEADS, AND ROOF					
Free of visible signs of coating failure?	☐	☐	☐	☐	
Free of noticeable distortions, buckling, etc.?	☐	☐	☐	☐	
Free of standing water on the roof?	☐	☐	☐	☐	
Are labels and tags intact and legible?	☐	☐	☐	☐	
TANK MANWAYS, PIPING, AND EQUIPMENT					
Flanged connections are tight and free of signs wear?	☐	☐	☐	☐	
TANK EQUIPMENT					
Normal and emergency vents free of obstructions?	☐	☐	☐	☐	
If storing gasoline, is there a pressure relief vent?	☐	☐	☐	☐	
Are flame arrestors free of corrosion?	☐	☐	☐	☐	
Are air passages free of blockages?	☐	☐	☐	☐	
Is emergency vent functional and working?	☐	☐	☐	☐	
Is interstitial monitor working?	☐	☐	☐	☐	
Are sight gauges clear?	☐	☐	☐	☐	
If equipment has a test function, does it activate?	☐	☐	☐	☐	
Are valves free of leaks, corrosion, and damage?	☐	☐	☐	☐	
Are strainers and filters clean and in good condition?	☐	☐	☐	☐	
INSULATED TANKS					
Is insulation missing?	☐	☐	☐	☐	
Is insulation free of moisture?	☐	☐	☐	☐	
Is insulation free of mold?	☐	☐	☐	☐	
Is insulation free of signs of coating failure?	☐	☐	☐	☐	
TANK/PIPING RELEASE DETECTION					
Is inventory control performed and documented?	☐	☐	☐	☐	
Is release detection being performed and documented?	☐	☐	☐	☐	
OTHER EQUIPMENT					
Are electrical wiring and boxes in good condition?	☐	☐	☐	☐	
Has the cathodic protection system been tested, as required, by the designing engineer?	☐	☐	☐	☐	

Notes:

AST	=	aboveground storage tank
CAR	=	corrective action required
NA	=	not applicable
STI	=	Steel Tank Institute

CATHODIC PROTECTION SYSTEM INSPECTION CHECKLIST

Instructions: Complete routine external operational inspection of cathodic protection systems of tank bottoms and buried piping. Notify Zone Maintenance Director or designee immediately if any significant deficiencies are identified.

Industry Standard Consideration: NACE 0169, NACE 0285, and API RP 651

Frequency: As specified below

Location: _____ Inspector: _____

Date: _____

	SAT	UNSAT	NA	CAR	Comments
IMPRESSED CURRENT SYSTEMS[1] (monthly inspection)					
Test Stations	☐	☐	☐	☐	_____
Connections	☐	☐	☐	☐	_____
Electrical Panel Box	☐	☐	☐	☐	_____
Rectifier	☐	☐	☐	☐	_____
CP Cable (condition and connections)	☐	☐	☐	☐	_____
Output Normal	☐	☐	☐	☐	_____
Power Consumption Normal	☐	☐	☐	☐	_____
Satisfactory Electrical State	☐	☐	☐	☐	_____
Overall Operation of CP	☐	☐	☐	☐	_____
IMPRESSED CURRENT SYSTEMS[2] (annual inspection)					
Electrical Shorts	☐	☐	☐	☐	_____
Ground Connections	☐	☐	☐	☐	_____
Meter Accuracy/Efficiency	☐	☐	☐	☐	_____
System Efficiency	☐	☐	☐	☐	_____
Circuit Resistance	☐	☐	☐	☐	_____
Isolation Fittings	☐	☐	☐	☐	_____
Continuity Bonds	☐	☐	☐	☐	_____
Casing Isolation	☐	☐	☐	☐	_____
Overall Operation of CP	☐	☐	☐	☐	_____
SACRIFICIAL ANODE SYSTEMS[2] (annual inspection)					
Overall Operation of Cathodic Protection	☐	☐	☐	☐	_____

Notes:

1	=	routine inspection
2	=	non-routine inspection
API	=	American Petroleum Institute
CAR	=	corrective action required
CP	=	cathodic protection
NA	=	not applicable
NACE	=	National Association of Corrosion Engineers
RP	=	recommended practice
SAT	=	satisfactory
UNSAT	=	unsatisfactory
UST	=	underground storage tank

FIELD-CONSTRUCTED BULK PRODUCT PIPING INSPECTION CHECKLIST

Instructions: Complete routine external visual inspection of bulk product piping (i.e., field-constructed storage tank product piping). Notify Zone Maintenance Director or designee immediately if any significant deficiencies are identified.

Industry Standard Consideration: API 570 (Sections 5 and 6), API 653, and API 2610

Frequency: Monthly and weekly — except continuously during bulk fuel transfers

Location: _____ Inspector: _____
(Print Name)

Date: _____ Inspector: _____
(Signature)

	SAT	UNSAT	NA	CAR	Comments
LEAKS					
Piping	☐	☐	☐	☐	_____
Expansion Joints	☐	☐	☐	☐	_____
Clamps and Supports	☐	☐	☐	☐	_____
Valves	☐	☐	☐	☐	_____
MISALIGNMENT					
Piping Misalignment/Restricted Movement	☐	☐	☐	☐	_____
Expansion Joint Misalignment	☐	☐	☐	☐	_____
VIBRATION					
Excessive Overhung Weight	☐	☐	☐	☐	_____
Inadequate Support	☐	☐	☐	☐	_____
Thin, Small-Bore, or Alloy Piping	☐	☐	☐	☐	_____
Threaded Connections	☐	☐	☐	☐	_____
Loose Supports Causing Metal Wear	☐	☐	☐	☐	_____
SUPPORTS					
Shoes off Support	☐	☐	☐	☐	_____
Hanger Distortion or Breakage	☐	☐	☐	☐	_____
Bottomed-Out Springs	☐	☐	☐	☐	_____
Excessive Pipe Sag	☐	☐	☐	☐	_____
Brace Distortion/Breakage	☐	☐	☐	☐	_____
Loose Brackets	☐	☐	☐	☐	_____
Slide Plates/Rollers	☐	☐	☐	☐	_____
Counter Balance	☐	☐	☐	☐	_____
CORROSION					
Piping	☐	☐	☐	☐	_____
Supports	☐	☐	☐	☐	_____
Insulation Interfaces	☐	☐	☐	☐	_____
Biological Growth	☐	☐	☐	☐	_____
MISCELLANEOUS					
Bolts and Nuts Present/Tight	☐	☐	☐	☐	_____
Pipe and Valve Labeling	☐	☐	☐	☐	_____
Grounding/Anode Straps	☐	☐	☐	☐	_____

Notes:

API = American Petroleum Institute
CAR = corrective action required
NA = not applicable
SAT = satisfactory
UNSAT = unsatisfactory

FIELD-CONSTRUCTED BULK STORAGE TANK ROUTINE IN-SERVICE INSPECTION CHECKLIST

Instructions: Complete routine in-service external visual inspection of bulk storage tanks (i.e., field-constructed storage tanks). Notify Zone Maintenance Director or designee immediately if any significant deficiencies are identified.

Industry Standard Consideration: API 653 (Section 6), API 2610, and API 2350

Frequency: Monthly

Location: _____ Inspector: _____
(Print Name)

Date: _____ Inspector: _____
(Signature)

	SAT	UNSAT	NA	CAR	Comments
FOUNDATION					
Leaks	☐	☐	☐	☐	
Intact/Sound	☐	☐	☐	☐	
Settlement	☐	☐	☐	☐	
SHELL					
Leaks	☐	☐	☐	☐	
Distortion	☐	☐	☐	☐	
Paint Condition	☐	☐	☐	☐	
Pitting and Corrosion	☐	☐	☐	☐	
Bottom/Foundation Seal	☐	☐	☐	☐	
ROOF					
Leaks	☐	☐	☐	☐	
Paint Condition	☐	☐	☐	☐	
Pitting and Corrosion	☐	☐	☐	☐	
Drainage	☐	☐	☐	☐	
Seal Condition	☐	☐	☐	☐	
MANWAYS, MANIFOLDS, AND NOZZLES					
Leaks	☐	☐	☐	☐	
Sealing	☐	☐	☐	☐	
Pitting and Corrosion	☐	☐	☐	☐	
PIPING					
Leaks	☐	☐	☐	☐	
Paint Condition	☐	☐	☐	☐	
Pitting and Corrosion	☐	☐	☐	☐	
Adequate Support	☐	☐	☐	☐	
SECONDARY CONTAINMENT					
Free of Storm Water[1]	☐	☐	☐	☐	
Free of Debris and Vegetation	☐	☐	☐	☐	
Cracks, Holes, or other Breaches	☐	☐	☐	☐	
Drain Valve Closed and Locked	☐	☐	☐	☐	
Drain Valve Functioning	☐	☐	☐	☐	
MISCELLANEOUS					
Grounding/Anode Straps	☐	☐	☐	☐	
High Level Alarms	☐	☐	☐	☐	
Remote/Side Gauges	☐	☐	☐	☐	

Notes:

1 = storm water must be treated before discharge if sheen present
API = American Petroleum Institute
CAR = corrective action required
NA = not applicable
SAT = satisfactory
UNSAT = unsatisfactory

SHOP-FABRICATED AST, GENERATOR, PAD-MOUNTED TRANSFORMER, HYDRAULIC OIL RESERVOIRS, AND USED COOKING OIL CONTAINER INSPECTION CHECKLIST

Instructions: Complete routine external visual inspection of shop-fabricated ASTs (i.e., typically consumptive-use tanks), diesel-fueled electrical generators, pad-mounted electrical transformers, hydraulic oil reservoirs, and used cooking oil containers. Notify Zone Maintenance Director immediately if any significant deficiencies are identified.

Industry Standard Consideration: STI SP001-06 (for shop-fabricated ASTs) and IEEE 62 (for transformers)

Frequency: Other than pad-mounted transformers—monthly; pad-mounted transformers—annually

Tank/Container, Date: _____ Inspector: _____

	YES	NO	NA	CAR	Comments
STRUCTURAL INTEGRITY					
Visible signs of leakage from tank?	☐	☐	☐	☐	
Surface free of leaks?	☐	☐	☐	☐	
Valves and gaskets free of leaks?	☐	☐	☐	☐	
Condition sound (no corrosion, pitting, distortions)?	☐	☐	☐	☐	
Bolts, rivets, welds, and seams intact/sound?	☐	☐	☐	☐	
Supports and foundation intact/sound?	☐	☐	☐	☐	
Tank drains closed?	☐	☐	☐	☐	
Level gauges and alarms working?	☐	☐	☐	☐	
Vents unobstructed and clean?	☐	☐	☐	☐	
Presence of water in primary tank?	☐	☐	☐	☐	
Grounding system functional?	☐	☐	☐	☐	
Cathodic protection system functional?	☐	☐	☐	☐	
ATTACHED PIPING					
Surface free of leaks?	☐	☐	☐	☐	
Valves and fittings free of leaks?	☐	☐	☐	☐	
Piping adequately supported?	☐	☐	☐	☐	
Pipes and supports free of corrosion?	☐	☐	☐	☐	
Buried pipes exposed?	☐	☐	☐	☐	
Out-of-service pipes capped?	☐	☐	☐	☐	
Signs/barriers present near aboveground piping?	☐	☐	☐	☐	
Localized cover/vegetation free of stain/distress?	☐	☐	☐	☐	
SECONDARY CONTAINMENT					
Drainage valves closed and locked?	☐	☐	☐	☐	
Drainage valves free of leaks?	☐	☐	☐	☐	
Containment area free of drainable water?	☐	☐	☐	☐	
Standing water free of product/sheen?	☐	☐	☐	☐	
Debris absent?	☐	☐	☐	☐	
Containment structure intact/sound?	☐	☐	☐	☐	
Water able to drain away from tank?	☐	☐	☐	☐	
Presence of water/fuel in interstice (DW AST?)	☐	☐	☐	☐	
Interstice leak detection operable (DW AST?)	☐	☐	☐	☐	
SECURITY					
Unit locked?	☐	☐	☐	☐	
Gates/fences intact/sound?	☐	☐	☐	☐	
Gates/fences locked?	☐	☐	☐	☐	
Starter controls locked?	☐	☐	☐	☐	
Lighting adequate?	☐	☐	☐	☐	

Notes:

AST	=	aboveground storage tank
CAR	=	corrective action required
DW	=	double-walled
IEEE	=	Institute of Electrical and Electronics Engineers
NA	=	not applicable
STI	=	Steel Tank Institute

DRUM AND PORTABLE/MOBILE CONTAINER INSPECTION CHECKLIST

Instructions: Complete routine external visual inspection of drums and portable/mobile containers. Notify Zone Maintenance Director or designee immediately if any significant deficiencies are identified.

Industry Standard: STI SP001-06

Frequency: Monthly

Storage Area/Date: _____ Inspector: _____

DRUM OR CONTAINER CONDITION SECONDARY CONTAINMENT	YES	NO	NA	CAR	Comments
Containment structure/diversion system present?	☐	☐	☐	☐	
Containment structure impermeable?	☐	☐	☐	☐	
Containment structure intact/sound?	☐	☐	☐	☐	
Debris/fluids absent?	☐	☐	☐	☐	
DRUM OR CONTAINER STORAGE AREA					
Located in designated storage area?	☐	☐	☐	☐	
Secure?	☐	☐	☐	☐	
Aisle space adequate for drum movement?	☐	☐	☐	☐	
Egress pathways clear and gates/doors operable?	☐	☐	☐	☐	
Debris, fluids or other fire hazards absent?	☐	☐	☐	☐	
Lighting adequate?	☐	☐	☐	☐	
Area organized/orderly?	☐	☐	☐	☐	
Incompatible material segregated?	☐	☐	☐	☐	
SPILL RESPONSE					
Spill response materials nearby?	☐	☐	☐	☐	
Spill response materials adequate?	☐	☐	☐	☐	
Emergency telephone number/POC posted?	☐	☐	☐	☐	

Notes:

CAR	=	corrective action required
NA	=	not applicable
POC	=	point of contact
STI	=	Steel Tank Institute

LOG FOR DRAINAGE OF DIKE BASINS/SECONDARY CONTAINMENT

Instructions: This log must be completed each time storm water is discharged from secondary containment. The storm water shall not be discharged without treatment if it has a visible sheen. Furthermore, any product in the secondary containment structure must be removed. Notify the Zone Maintenance Director or designee immediately if any significant deficiencies are identified.

Industry Standard Consideration: NFPA 30-2018

Frequency: After each significant rain event

Date Of Draining Operation	Time Site Was Drained	Description Of Tank/ Vault/ Secondary Containment Site	Name Of Individual Inspecting Water Before Draining	Presence Of Sheen (X)		Signature Of Individual Draining Containment Site
				YES[1]	NO	

Notes:

1 = product or sheen

NFPA = National Fire Protection Association

OIL WATER SEPARATOR/SUMP INSPECTION CHECKLIST

Instructions: Complete routine external visual inspection of oil-water separators (OWSs) and sumps. Notify the Zone Maintenance director or designee immediately if any significant deficiencies are identified.

Industry Standard Consideration: Maintain IAW manufacturer's specifications
Frequency: As specified below

Location: _____ Inspector: _____
(Print Name)

Date: _____ Inspector: _____
(Signature)

WEEKLY INSPECTION	**SAT**	**UNSAT**	**NA**	**CAR**	**Comments**
OWS/Grease Trap Functioning	☐	☐	☐	☐	_____
Presence of Free Product[1]	☐	☐	☐	☐	_____
Presence of Sheen[1]	☐	☐	☐	☐	_____
Presence of Fuel Odor[1]	☐	☐	☐	☐	_____
Coalescer Inspection for Fouling	☐	☐	☐	☐	_____
Operation of Pump, Valve, Skimmer, etc.	☐	☐	☐	☐	_____
MONTHLY INSPECTION					
Leaks from Separator or Appurtenances	☐	☐	☐	☐	_____
Operation of Pumps	☐	☐	☐	☐	_____
Determination of Solids Level	☐	☐	☐	☐	_____
OWS/Grease Trap Free of Blockage	☐	☐	☐	☐	_____
Up/Down Stream Free of Blockage	☐	☐	☐	☐	_____
SEMI-ANNUAL INSPECTION					
Determination of Oil/Grease Level	☐	☐	☐	☐	_____
AS REQUIRED					
Inspection/Cleaning of Internal Chambers	☐	☐	☐	☐	_____

Notes:

1	=	inspect OWS/grease trap/sump and effluent
CAR	=	corrective action required
IAW	=	in accordance with
NA	=	not applicable
OWS	=	oil water separator
SAT	=	satisfactory
UNSAT	=	unsatisfactory

SPILL KIT CHECKLIST

Instructions: Complete routine external visual inspection of spill kits. Notify Zone Maintenance Director immediately if any significant deficiencies are identified.

Industry Standard: Facility operating procedures

Frequency: Monthly

Location: ______________________________ Inspector: ______________________________
Date: ______________________________

SPILL RESPONSE	**YES**	**NO**	**NA**	**CAR**	**Comments**
Spill response materials near sources?	☐	☐	☐	☐	____________________
Spill response materials adequate?	☐	☐	☐	☐	____________________
Emergency telephone number/contact posted?	☐	☐	☐	☐	____________________
Personal protective equipment in kit?	☐	☐	☐	☐	____________________

Location: ______________________________ Inspector: ______________________________
Date: ______________________________

SPILL RESPONSE	**YES**	**NO**	**NA**	**CAR**	**Comments**
Spill response materials near sources?	☐	☐	☐	☐	____________________
Spill response materials adequate?	☐	☐	☐	☐	____________________
Emergency telephone number/contact posted?	☐	☐	☐	☐	____________________
Personal protective equipment in kit?	☐	☐	☐	☐	____________________

Location: ______________________________ Inspector: ______________________________
Date: ______________________________

SPILL RESPONSE	**YES**	**NO**	**NA**	**CAR**	**Comments**
Spill response materials near sources?	☐	☐	☐	☐	____________________
Spill response materials adequate?	☐	☐	☐	☐	____________________
Emergency telephone number/contact posted?	☐	☐	☐	☐	____________________
Personal protective equipment in kit?	☐	☐	☐	☐	____________________

Notes:
CAR = corrective action required
NA = not applicable

TANK TRUCK FUEL LOADING/UNLOADING INSPECTION CHECKLIST

Instructions: Complete routine external visual inspection of truck loading/unloading areas. Notify the Zone Maintenance Director or designee immediately if any significant deficiencies are identified.

Industry Standard Consideration: American Petroleum Institute 2610
Frequency: As needed

Location: _____ Inspector: _____
(Print Name)

Date: _____ Inspector: _____
(Signature)

HOSES, PIPES, AND VALVES	SAT	UNSAT	NA	CAR	Comments
Leaks	☐	☐	☐	☐	_____
Operation	☐	☐	☐	☐	_____
Deterioration	☐	☐	☐	☐	_____
Clamps and supports	☐	☐	☐	☐	_____
STRUCTURE					
Bolts, clamps, and supports	☐	☐	☐	☐	_____
Roofing and ladders	☐	☐	☐	☐	_____
GENERAL					
Electrical ground	☐	☐	☐	☐	_____
Portable equipment stowed	☐	☐	☐	☐	_____
Secondary containment structure	☐	☐	☐	☐	_____
Instruction/warning signage	☐	☐	☐	☐	_____
Traffic control devices	☐	☐	☐	☐	_____
Dispenser labeling	☐	☐	☐	☐	_____
Security lighting	☐	☐	☐	☐	_____
CONTROL DEVICES					
Early departure warning device	☐	☐	☐	☐	_____
Starter control	☐	☐	☐	☐	_____
Scully system	☐	☐	☐	☐	_____
Dead-man controls	☐	☐	☐	☐	_____
Pumps	☐	☐	☐	☐	_____
SECONDARY CONTAINMENT					
Drain inlets protected	☐	☐	☐	☐	_____
Spill response material on hand	☐	☐	☐	☐	_____
Oil stains/sheen	☐	☐	☐	☐	_____

Notes:

CAR = corrective action required
NA = not applicable
SAT = satisfactory
UNSAT = unsatisfactory

STATE OF TENNESEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 12th Floor
Nashville, TN 37243

MANUAL TANK GAUGING MONTHLY REPORT

All applicable sections of this report must be legibly completed in their entirety, documenting all results of manual tank gauging.
This method may not be used for tanks of capacity greater than 2,000 gallons. Any tanks, regardless of capacity installed on or after July 24, 2007 may not use this method.

- Complete section I through IV for all tanks being monitored.
- Complete Tank Tightness Testing Form when conducting required tank tightness test.
- The owner/operator of the underground storage tank (UST) system is to maintain a copy of this report for each month for a period of 12 months.
- Compare weekly readings and the monthly average of the four weekly readings with the standards shown in the following table. If the calculated change exceeds the weekly standard, the tank may be leaking. Also, the monthly average of the four weekly test results must be compared to the monthly standard in the same way. If either the weekly or monthly standards have been exceeded, the tank may be leaking. Contact your local environmental field office to report the suspected release within seventy-two (72) hours and begin release response activities.

Tank Size	Minimum Duration of Test	Weekly Standard (1 test)	Monthly Standard (4 test average)
Up to 550 gallons	36 hours	10 gallons	5 gallons
551-1,000 gallons (when tank diameter is 64')	44 hours	9 gallons	4 gallons
551-1,000 gallons (when tank diameter is 48")	58 hours	12 gallons	6 gallons
551-1,000 gallons (also requires periodic tank tightness testing)	36 hours	13 gallons	7 gallons
1,001-2,000 gallons (also requires periodic tank tightness testing)	36 hours	26 gallons	13 gallons

I. UST FACILITY INFORMATION

UST Facility ID #

Facility Name:

Address:

City: County:

II. OWNER INFORMATION

Name/Company:

Address:

City: State: Zip:

Phone Number:

III. TESTING INFORMATION

- An additional copy of this report is to be completed for each tank that qualifies for the method.

Tank Number

Month/Year

	Week 1	Week 2	Week 3	Week 4
Start Test	Date:	Date:	Date:	Date:
	Time:	Time:	Time:	Time:
First Initial Stick Reading				
Second Initial Stick Reading				
Average Initial Stick Reading				
Initial Gallons (convert inches to gallons) **[a]**				

III. TESTING INFORMATION

	Week 1	Week 2	Week 3	Week 4
End Test	Date:	Date:	Date:	Date:
	Time:	Time:	Time:	Time:
First End Stick Reading				
Second End Stick Reading				
Average End Reading				
End Gallons (convert inches to gallons) **[b]**				

III. RESULT CALCULATION

Change in Tank Volume in Gallons = or - **[a - b]**				
Does tank pass weekly test? (indicate yes or no)				

To determine if the Monthly Standard was achieved, add the four weekly **Change in Tank Volume, [a-b]**, figures, then divide the sum by four and enter result in the next column.

Week 1 [ ] + Week 2 [ ] + Week 3 [ ] + Week 4 [ ] /4

= monthly result [ ]

Compare the result with the **Monthly Standard** for this tank size on Page 1.

If calculated monthly result is equal to or less than the **Monthly Standard**, the result is Pass.

If the calculated monthly result is more than the **Monthly Standard**, the result is Fail.

monthly result [ ] **Monthly Standard** [ ]

Does tank pass monthly test? (indicate yes or no) [ ]

Comments:

Signature of Person Completing Form:	Date:

STATE OF TENNESEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 12th Floor
Nashville, TN 37243

MONTHLY ELECTRONIC INTERSTITIAL MONITORING ALARM REPORT

This report is used to document interstitial monitoring of underground storage tanks (UST) systems equipped with secondary containment. Interstitial monitoring is required on all UST systems installed after July 24, 2007.

- Document the status of any alarms reported during the monitoring period.
- Maintain these records for a minimum of 12 months and submit them for review upon request by the division.
- Attach copies of all monthly sensor status and alarm history reports for the monitoring period.
- Report any unusual operating conditions or suspected releases discovered to the division within 72 hours of discovery.
- For required annual sensor testing, complete the Annual Electronic Interstitial Monitoring Test Report (CN-1339)

I. UST FACILITY INFORMATION				II. PERSON CONDUCTING MONITORING			
UST Facility ID #				Name:			
Facility Name:				Company:			
Address:				City:		State:	
City:		County:		Phone Number:			

III. INTERSTITIAL MONITORING ALARM LOG

- Document all sensor alarms that occurred during the previous 30 days using this section of the report.
- Document that all alarms or suspected releases have been investigated and, if necessary, attach the appropriate documentation to this report.
- If your monitoring device is capable of producing an "alarm history" report, then attach a copy of the report to this form.

Monitoring Period (month/year)		If no alarms, then check this box: ☐

Date of Alarm	Sensor Location and Cause of Alarm	Describe Action Taken

Signature:	Date:

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS
William R. Snodgrass Tennessee Tower
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Nashville, Tennessee 37243

Monthly Spill Bucket Inspection Log

Instructions

Tennessee Underground Storage Tank Rules require that visual inspections be made of all spill buckets on a monthly basis. Rule 0400-18-01-.02(3)(b)3. states;

"Spill catchment basins shall be visually inspected by the owner and/or operator at least once per month to assure the integrity of the storage space provided for spill containment. A log of these inspections showing at a minimum the last twelve (12) months shall be maintained by the owner and/or operator."

- Use this form to record results of visual inspections of each spill bucket at the facility once each month.
- A separate form should be used for each facility. Indicate the year this form is for in the space provided.
- The front of this form has space for up to six spill buckets. If there are more than six spill buckets at this facility, use the back of this form or make additional copies.
- If no standing liquid or spill bucket defects (cracks, torn connectors, etc.) are noted, write "**OK**" in the appropriate column and row.
- If any standing liquid or spill bucket defects are noted, write "**Not OK**" in the appropriate column and indicate what action was taken.
- You must take measures to repair any spill bucket defects observed. If there are spill bucket defects and indications of released petroleum, it must be reported as a suspected release according to rule 0400-18-01-.05 and .06.
- Maintain the last 12 months of these inspections and have them available for state inspection.

UST FACILITY INFORMATION		
NAME:	FACILITY ID #:	YEAR:
ADDRESS:	CITY:	ZIP:

Checked MM/DD/YY	Monthly Spill Bucket Visual Inspections Record condition in each block for the appropriate spill bucket (SB)						Action taken if SB not OK
	SB # 1	SB # 2	SB # 3	SB # 4	SB # 5	SB # 6	
/ /							
/ /							
/ /							
/ /							
/ /							
/ /							
/ /							
/ /							
/ /							
/ /							
/ /							

Use this side for additional spill buckets present at this location.

Please indicate spill bucket number in the space provided. Use additional sheets for this location if necessary.

Checked MM/DD/YY	**Monthly Spill Bucket Visual Inspections** Record condition in each block for the appropriate spill bucket (SB)						Action taken if SB not OK
	SB # ___	**SB # ___**	**SB # ___**	**SB # ___**	**SB # ___**	**SB # ___**	
/ /							
/ /							
/ /							
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/ /							
/ /							

Appendix C
Training Record Forms

University of Tennessee Main Campus
Spill Prevention, Control, and Countermeasure Plan Training Roster

Training Topic _____

Training Date _____

Personnel	Unit / Assignment	Telephone Number

Appendix D
Spill Report Forms

University of Tennessee Main Campus Emergency Action Checklist			
Incident Title:			**Date:**
Reported By:			**Time:**
Status			**Steps To Be Taken in an Emergency Situation**
Done	**To Do**	**NA**	
			1. Identify the source of the spill.
			2. Provide first aid to any injured. Call 911 if assistance is required.
			3. Notify:
			a. Fire Department: Assistant Fire Chief or Fire Crew Chief (Incident Commanders) 911
			b. Derek Bailey, Zone Maintenance Director..... 865-946-777
			c. Garrett Ferry, Coordinator III.....865-946-7777
			4. Stop the flow of oil/hazardous substance (without endangering personnel).
			a. Close valve.
			b. Tighten gasket.
			c. Shut down pump.
			d. Complete any necessary action to stop the flow of oil/hazardous substance.
			5. Close all spill drains.
			6. Close/stop all downstream drains.
			7. Estimate the amount and type of oil spilled or hazardous substance released.
			8. Secure the area.
			9. Identify hazards and immediate areas threatened.
			10. Make initial external notifications in accordance with Table 17-1 of the SPCC Plan.
			11. Initiate memorandum of agreements for support and response contractors as necessary.
			12. Start cleanup.
			13. Remove/reuse recovered material.
			14. Complete follow up external notifications in accordance with Table 17-1 of the SPCC Plan.

Notes:

NA = not applicable

SPCC = Spill Prevention, Control, and Countermeasure

University of Tennessee Main Campus **Zone Maintenance Director Checklist**			
Done	**To Do**	**NA**	**Discovery and Notification**
			Ensure required installation, regulatory agency, and response contractor notifications are made.
Initial Actions			
			Spill response contractor activated (time):
			Evaluate the incident: • Materials involved – • Personnel hazards – • Fire/explosion hazard – • Total amount lost – • Recovered amount – • Evaporation/burned – • Uncontained – • Wildlife impact –
			Perform initial site safety characterization. Use Initial Site Safety and Control Analysis Form in this appendix.
			Prepare/deliver initial incident assessment briefing to spill management team.
			Advise the federal on-scene coordinator on actions being taken.
			Determine if support is sufficient: • Land response equipment needed – • Water response equipment needed –
Defensive Actions			
			Secure the source.
			Prepare and follow site safety plan: • Conduct site safety briefings for response personnel. • Establish decontamination procedures for response personnel. • Set up eyewash/washdown/decontamination station.
			Set up first-aid stations.
			Designate exposure monitoring personnel.
			Deploy response assets.
			Evacuations: • Facility evacuation • Community evacuation
			Request assistance if required.
			Establish site traffic control.

University of Tennessee Main Campus **Zone Maintenance Director Checklist (continued)**			
Done	**To Do**	**NA**	**Discovery and Notification**
			Establish command post and communications center.
			Establish unified command with federal and state on-scene coordinators.
			Obtain source(s) for material handling equipment.
			Communications: • Obtain cellular phones. • Establish working channels (VHF).
Recovery, Cleanup, and Disposition			
			Coordinate cleanup with federal (NRT, RRT, etc.), and state agencies.
			Obtain food and water for response personnel.
			Obtain sanitary facilities within reasonable distance of site.
			Document respiratory and/or skin reaction complaints.
			Initiate salvage operations.
			Implement/maintain fire control.
			Obtain samples for analysis.
Documentation and Cost Recovery			
			Prepare preliminary damage assessment and update frequently.
			Prepare natural resource damage assessment.
			Maintain field accounting for accurate cost tracking.
			Identify funding sources.
			Waste Management: • Type of oil or hazardous substance – • Amount of contaminated liquids – • Amount of contaminated solids – • Amount of hazardous materials –
			Determine proper storage procedures for contaminated materials.
			Determine proper disposal procedures for contaminated materials and coordinate disposal with appropriate federal and state agencies.
			Communicate available information on response activities to Public Affairs Officer (facts only, no speculation) for dissemination to media.

Notes:

NA = not applicable
NRT = National Response Team
RRT = Regional Response Team

University of Tennessee Main Campus Response Notification Form		
Incident Title:		
Reporter Information		
Reporter's Name		
Reporter's Telephone Number		
Reporter's Position		
Facility Name	The University of Tennessee – Main Campus	
Owner's Name	State of Tennessee	
Address	Street:	2111 Terrace Avenue
	City:	Knoxville
	County:	Knox
	State:	Tennessee
	Zip Code:	37996
Materials Released?	☐ YES	☐ NO
Federal Reporting Requirements Met?	☐ YES	☐ NO
Responsible Parties Called?	☐ YES	☐ NO
Date and Time of Each NRC Notification (use 24-hour time)		

Notes:
NRC = National Response Center

University of Tennessee Main Campus Response Notification Form (continued)	
Incident Title:	
Incident/Spill Description	
Source and/or Cause of Incident	
Date	
Time of Incident	
Incident Address/Location	
Nearest City	
County	
State	
ZIP Code	
Distance from City (miles)	
Incident Container Type	
Incident Tank Capacity	
Total Incident Capacity	
Weather Conditions	
Material Released (land or water)? ☐ YES ☐ NO	Total Quantity Released Material Released into Water? ☐ YES ☐ NO Quantity Released into Water

University of Tennessee Main Campus Response Notification Form (continued)	
Incident Title:	
Response Actions	
Initial Response Actions (Include Activity Name)	
Actions Taken to Control Incident (Include Responders' Names)	
Actions Taken to Mitigate Incident (Include Responders' Names)	

University of Tennessee Main Campus Response Notification Form (continued)	
Incident Title:	
Impact	
Number of Injuries	
Number of Deaths	
Evacuation(s) Required?	☐ YES ☐ NO
Number Evacuated	
Was There Any Damage?	☐ YES ☐ NO
Damage in Dollars (estimated)	
Medium (soil, water, etc.) Affected	
Description of Effect	
Additional Information about Medium (soil, water, etc.)	
Additional Information (any information about the incident not recorded elsewhere in the report)	

University of Tennessee Main Campus Response Notification Form (continued)				
Incident Title:				
Notification Status	**Contacted?**	**Date Contacted**	**Name/Contact**	**Call-Back Telephone Number**
Fire Department: 911	☐ Yes ☐ No			
Primary Contact Person: Derek Bailey, Zone Maintenance Director (865) 659-6377 or (865) 946-7777	☐ Yes ☐ No			
Secondary Contact Person: Garrett Ferry, Coordinator III (865) 805-4007 or (865) 946-7777	☐ Yes ☐ No			
NRC: (800) 424-8802	☐ Yes ☐ No			
U.S. EPA Region 4, USCG Sector Ohio Valley and other State agencies as necessary: covered by call to NRC	☐ Yes ☐ No			
Knoxville-Knox County Emergency Management Agency (865) 215-1177	☐ Yes ☐ No			
Spill Response Consultant: EnSafe Inc. (888) 590-8885	☐ Yes ☐ No			

Notes:

U.S. EPA	=	U.S. Environmental Protection Agency
USCG	=	United States Coast Guard
NRC	=	National Response Center

University of Tennessee Main Campus
Response Notification Form (continued)

Incident Title:

Notification Status	Contacted?	Date Contacted	Name / Contact	Call-Back Telephone Number
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			
	☐ Yes ☐ No			

University of Tennessee Main Campus
Initial Site Safety and Control Analysis – Part 1

Incident Title:	**Date Prepared:**	**Time Prepared:**	**Location:**

To be completed by Zone Maintenance Director prior to any immediate response actions.

Incident Commander:

1. Wind direction across incident: ☐ Toward your position ☐ Away from your position

2. Are people trapped or injured? ☐ Yes ☐ No

3. Are people involved as unorganized observers or involved in rescue attempts? ☐ Yes ☐ No

4. Are there any immediate signs of potential hazards?

a.	Electrical lines down or overhead?	☐ Yes ☐ No
b.	Unidentified liquid or solid products visible?	☐ Yes ☐ No
c.	Colored vapors visible?	☐ Yes ☐ No
d.	Smells which are not natural noted?	☐ Yes ☐ No
e.	Fire, sparks nearby, sources of ignition present?	☐ Yes ☐ No
f.	Holes, caverns, deep ditches, fast-moving water, cliffs nearby?	☐ Yes ☐ No
g.	Is local traffic a potential problem?	☐ Yes ☐ No
h.	Signs, placards, or color codes indicating danger?	☐ Yes ☐ No
i.	Spill zone	☐ Dry ☐ Wet ☐ Icy

5. As you approach the scene from the upwind side, did you note a change in the status of any of the above?
☐ Yes ☐ No

6. Have you established control of the area involved in the incident?

Hot Zone	☐ Yes ☐ No
Warm Zone	☐ Yes ☐ No
Incident Site	☐ Yes ☐ No

7. Have you determined the necessity for any of the following?

a.	Security?	☐ Yes ☐ No
b.	Hazardous material technician to identify or monitor substances involved in the incident?	☐ Yes ☐ No
c.	Protective gear and to what level of protection?	☐ Yes ☐ No
d.	Site for decontamination center?	☐ Yes ☐ No
e.	Site for command center?	☐ Yes ☐ No
f.	Safety equipment you will need to eliminate the problems?	☐ Yes ☐ No
g.	Placement of the warning sign? (i.e., benzene, no smoking, etc.)	☐ Yes ☐ No
h.	Number of personnel needed to control the situation?	☐ Yes ☐ No

Notes:

1. Before entering a potentially hazardous work environment, **IT MUST BE EVALUATED BY A COMPETENT PERSON** to establish safe work practices, personnel protective equipment, and other control procedures. As a minimum, lower explosive limit, oxygen, and benzene concentrations must be evaluated.
2. Spill cleanup areas shall be controlled as "regulated areas." If benzene vapors are or may be expected to equal the action level of 0.5 part per million, then the area must be posted with the following warning:

DANGER – BENZENE
CANCER HAZARD
FLAMMABLE – NO SMOKING
AUTHORIZED PERSONNEL ONLY
RESPIRATOR REQUIRED

University of Tennessee Main Campus
Initial Site Safety and Control Analysis – Part 2

Incident Title:	**Date Prepared:**	**Time Prepared:**	**Location:**

1. Review your "Initial Site Safety and Control Analysis" report.
2. Use the map provided in the Red Plan. Mark the incident and prevailing wind direction. Include at least two major landmarks and an address, if known.
3. *Analysis of potential harmful substances on scene and exposure factor:

Type of Substance	**Container**	**Secure?**

4. *Protective gear required:
   a. Respirator protection required? ☐ Yes ☐ No
      If yes, what type_____
   b. Self-contained breathing apparatus required? ☐ Yes ☐ No
   c. Protective clothing required? ☐ Yes ☐ No

   If yes, what level of protection is required and describe in detail:

5. Set up monitoring system, if required.

* To be completed by Zone Maintenance Director or qualified technician.

University of Tennessee Main Campus
Initial Site Safety and Control Analysis – Part 2 (continued)

Incident Title:	**Date Prepared:**	**Time Prepared:**	**Location:**

6. Is a vehicle/vessel/tank involved? ☐ Yes ☐ No

If yes:

Driver's/Captain's Name: _____

Driver's/Captain's License: _____

Equipment/Vehicle Number: _____

Tractor/Trailer Number: _____

Railcar Number: _____

Vessel Number: _____

Ship Name and Number: _____

7. General Information:

Carrier's Name: _____

Telephone Number: _____

Manufacturer of Chemical: _____

Telephone Number: _____

Point of Origin: _____

Destination: _____

Ship Name and Number: _____

8. Call 911 if medical assistance is required. Call Security as threat conditions warrant.

9. *Determine degree of decontamination required and designate area.

10. Set up secure area and notify area residents, if applicable.

11. Establish safe work practices, personnel protective equipment requirements, and area vapor monitoring requirements. Conduct a field meeting with all personnel to explain in detail communication requirements, personal protective equipment, and other site-specific requirements as necessary.

12. Start control, containment, cleanup decontamination, and disposal process.

* To be completed by Zone Maintenance Director or qualified technician.

University of Tennessee Main Campus Initial Site Safety and Control Analysis – Part 2 (continued)			
Incident Title:	**Date Prepared:**	**Time Prepared:**	**Location:**

Prepared by:	Zone Maintenance Director
Contents	***Responsible Person***
General Advisories	Zone Maintenance Director
Division/Group	Zone Maintenance Director
Chemical/Physical Hazards	Zone Maintenance Director
Precautions	Zone Maintenance Director
Approved by	Incident/Deputy Commander
Distribution	All Recipients of Incident Action Plans

Additional Notes/Items of Importance

Protection Priorities	**- Human Life** **- Natural Resources** **- Property, Economic, and Public Impact**

THE UNIVERSITY OF TENNESSEE, KNOXVILLE - MAIN CAMPUS RED PLAN[1]

Table Red Plan-1
Immediate Response Actions

Action	Comments
1. Alert personnel within the immediate area.	Have nonessential personnel evacuate to the area *upgradient and upwind* and report to a designated meeting place. If there are fuel vehicles in the area, have the drivers relocate them **if it is safe to do so**. Control the perimeter of the spill area.
2. Identify the materials that have been spilled.	Check the Safety Data Sheets (SDS) for each chemical if you are unfamiliar with the hazards and wear proper personal protective equipment. **Do not attempt to clean up the spill if you are not properly trained to do so.**
3. Eliminate the source of the spill.	Immediately shut off the source of the spill or upright the container **if it is safe to do so**. Minimize and contain the spill.
4. Eliminate flame or other sources of ignition.	Extinguish any source of spark or flame in the area. Cease operation of machinery near the spill.
5. Report the spill.	Get help as soon as possible. Report the spill to your supervisor. **Call the Fire Department at 911.**
6. Contain and absorb.	Keep the spill from spreading by using absorbent or other spill response materials. Block or divert from storm drains, ditches, or ventilation systems.
7. Clean up and decontaminate.	Once the spilled material is absorbed, remove all contaminated materials and decontaminate equipment and responders.
8. Dispose.	After decontamination, all materials must be properly packaged for disposal and labeled in accordance with hazardous waste disposal procedures such as Title 29 CFR Part 1200.
9. Restore surroundings.	Be sure all safety and cleanup equipment and materials are replenished and ready for future use.

[1] In the event of a spill at the University of Tennessee, Knoxville - Main Campus, the Red Plan serves as the "Jump Start" for initiating response actions. All information contained in the Red Plan has been extracted directly from the Spill Prevention Control, and Countermeasure (SPCC) Plan. The Red Plan user is expected to transition to the SPCC Plan as soon as possible.

Protection Priorities	**- Human Life** **- Natural Resources** **- Property, Economic, and Public Impact**

Table Red Plan-2 "Key" Emergency Personnel/Offices	
City of Knoxville Fire Department – Station #9	**911 (on/off duty hours primary) 865-595-4480 (non-emergency)**
University of Tennessee, Knoxville	**911 (on/off duty hours primary) 865-974-3111 (non-emergency)**
Derek Bailey, Zone Maintenance Director	**865-659-6377 (on duty hours, primary) 865-946-7777 (off duty hours primary)**
Garrett Ferry, Coordinator III	**865-805-4007 (on duty hours, primary) 865-946-7777 (off duty hours, primary)**
Brian Gard, UTK Director of Emergency Management	**865-974-9347 (on duty hours, primary) 865-974-9586 (off duty hours, primary)**
Spill Consultant	**888-590-8885 (on/off duty hours, primary) 615-255-9300 (non-emergency)**
Department of General Services Environmental Compliance Manager	**615-428-8101 (on/off duty hours, primary)**

Table Red Plan-3 "Immediate" External Notifications	
National Response Center (Federal Reporting Requirements — notifies U.S. Environmental Protection Agency [U.S. EPA] Region 4 U.S. Coast Guard [USCG] District 8 if applicable; and other State agencies as necessary)	**800-424-8802**
Knoxville-Knox County Emergency Management Agency	**911 865-215-1177**
Hospital – UT Medical Center	**911 865-305-9000**
AMR Ambulance Services	**911 865-573-5779**
U.S. EPA Region 4, Emergency Response Branch (24-hr)	**404-562-8700**
Tennessee Emergency Management Agency	**800-262-3300**
Tennessee Department of Environment and Conservation (Knoxville Environmental Field Office)	**865-594-6035 888-891-8332**

Protection Priorities	**- Human Life** **- Natural Resources** **- Property, Economic, and Public Impact**

Table Red Plan-4 Immediate Spill Notification Form	
DO NOT DELAY NOTIFICATION PENDING COMPLETE INFORMATION	
Time:	Date:
Name and Location of Facility/Building Number:	
Name of Individual Making Report:	
Contact Phone Number:	
Type of Product Spilled:	Time of Spill:
Quantity Released:	Duration of Release:
Did the Spill Reach Navigable Waters?	☐ YES ☐ NO
Cause and Source of Discharge:	
Actions Being Taken:	
Injuries or Deaths:	☐ YES ☐ NO

Safety Considerations -

- Consider potential safety and health hazards for each spill.
- Use the "buddy system" for entry.
- Obtain current health hazard data.
- Do not work in environments that exceed your training or capabilities.
- Inform supervisor of intended destination and estimated time of return.
- Do not unnecessarily enter or travel into spill areas.
- Avoid skin contact with spilled material.
- Use proper personal protective equipment, minimally:
  - Hard hat
  - Gloves
  - Coveralls
  - Boots
  - Eye/face protection.
- Do not rely on your senses to determine hazardous conditions - use calibrated detection devices.

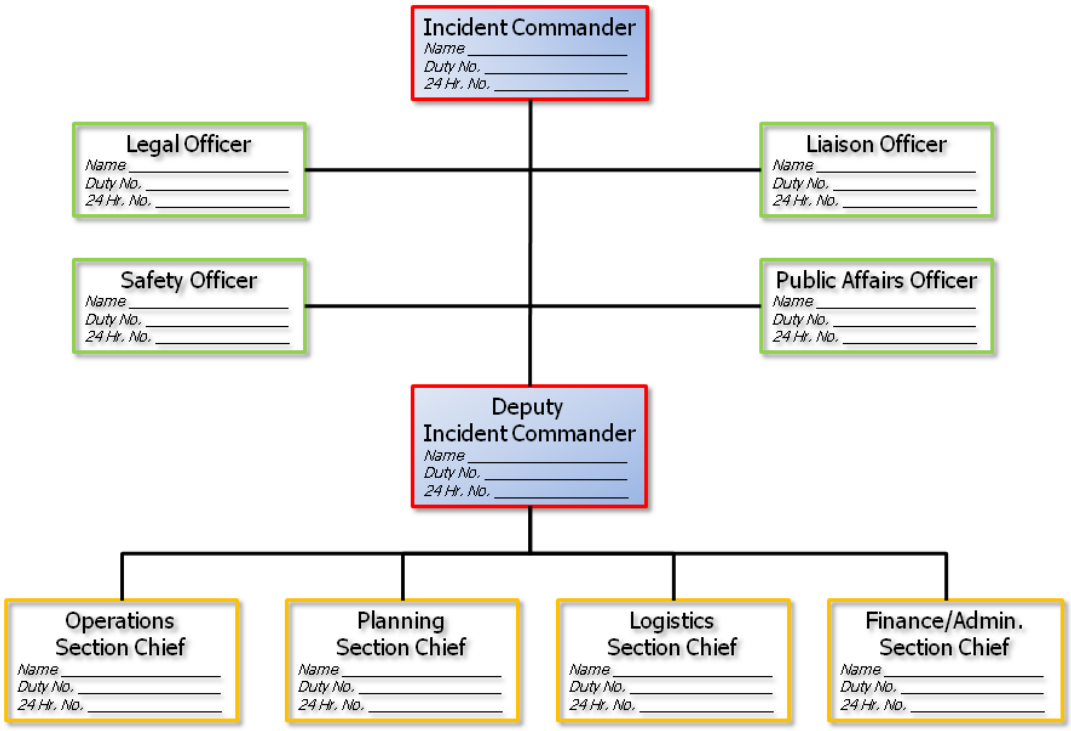
Protection Priorities	- Human Life - Natural Resources - Property, Economic, and Public Impact

INCIDENT BRIEFING	1. Incident Name:	2. Date Prepared:	3. Time Prepared:
Map Sketch			

Protection Priorities	**- Human Life** **- Natural Resources** **- Property, Economic, and Public Impact**

INCIDENT BRIEFING	1. Incident Name:	2. Date Prepared:	3. Time Prepared:

Current Organization



Resource Summary:

Resources Ordered	Resources identified	ETA	On Scene	Location/Assignment

Protection Priorities	- Human Life - Natural Resources - Property, Economic, and Public Impact

INCIDENT BRIEFING	1. Incident Name:	2. Date Prepared:		3. Time Prepared:

Command Objectives:

Summary of Current Actions:

	Page _____ of _____	Prepared by:

Initial Spill Contact Flow-Chart:

*This flowchart is meant to aid in determining under what conditions agencies/individuals should be contacted during initial spill response activities. Use this flowchart **after** contacting emergency services at 911 (if needed in the event of injuries, fire, etc.). If the spill cannot be controlled or cleaned by facility personnel, TEMA should be contacted at 800-262-3300.*

Has material spilled on the ground and/or escaped from containment (spill pallets, dikes, etc.)? *(If the spill involves a generator or transformer, contact the owner, as well as the agencies/individuals indicated below.)*

No →
- Contact the Zone Maintenance Director at: 865-659-6377 (cell) or 865-946-7777 (24-hour)
- Initiate immediate Response Actions per the University of Tennessee, Knoxville – Main Campus Red Plan

Yes ↓
- Contact the Zone Maintenance Director at: 865-659-6377 (cell) or 865-946-7777 (24-hour)
- Initiate immediate Response Actions per the University of Tennessee, Knoxville – Main Campus Red Plan
- Proceed to the question below:

Has more than 25 gallons of material spilled?

No → **Has the spilled material impacted surface water and/or sanitary/storm sewers?**

No → Continue with spill cleanup as needed

Yes ↓
- Contact the Spill Consultant at 888-590-8885
- Contact TDEC at 888-891-8332
- Contact DGS at 615-428-8101
- Proceed to the next question below:

Has the spilled material also impacted surface water and/or sanitary/storm sewers?

No →
- Continue with spill cleanup as needed
- Follow up with written spill reporting as outlined in Sections 17 and 18 of the SPCC Plan

Yes ↓
- Contact NRC at 800-424-8802
- Contact TEMA at 800-262-3300 (for spills to navigable waters/shorelines *or uncontrolled)*
- Contact the owner of the sewer (if applicable)
- Proceed to the next question below:

Yes ↓
- Contact the Spill Consultant at 888-590-8885
- Contact TDEC at 888-891-8332
- Contact NRC at 800-424-8802
- Contact DGS at 615-428-8101
- Contact TEMA at 800-262-3300 (for spills to navigable waters/shorelines)
- Contact the owner of the sewer (if applicable)
- Proceed to the next question below:

Has more than 1,000 gallons of material spilled, or have more than two spills of more than 42 gallons occurred in the last 12-month period?

No →
- Continue with spill cleanup as needed
- Follow-up with required written spill reporting as outlined in Sections 17 and 18 of the SPCC Plan

Yes ↓
- Contact the U.S. EPA at 404-562-8700
- Follow-up with required written reporting as outlined in Sections 17 and 18 of the SPCC Plan

Notes:
DGS – Department of General Services
NRC – National Response Center
SPCC – Spill Prevention Control and Countermeasure
TDEC – Tennessee Department of Environment and Conservation
TEMA – Tennessee Emergency Management Agency
U.S. EPA – United States Environmental Protection Agency

FIRST RESPONDER REPORTING FORM

Collect as much of the following information as reasonable before making initial notification.

Critical Information	
Name and rank of reporting individual	
Location of spill (building/area number, indoors or outside)	
Number of injured personnel	
Type of injuries	
Substance(s) spilled	
Estimated quantity spilled	
Rate of discharge/release	
Time of spill	
Extent of spill travel	

Does the Fire Department need to respond to protect life, property, or environment?	Yes	No

Additional Information (i.e., other potential hazards)

Initial information is critical. Get as much information as you can, but don't hesitate to make the initial notification if a spill is moving or worsening rapidly!

REVERSE CARD FOR SPILL RESPONSE ACTION