TEXAS STATE UNIVERSITY®

The rising STAR *of Texas*

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN (SPCC)

Texas State University San Marcos Campus

July 2008

Updated April 2021

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION

The purpose of this Spill Prevention Control and Countermeasure (SPCC) Plan is to describe measures implemented by Texas State University (Texas State) to prevent oil discharges from occurring, and to prepare Texas State to respond in a safe, effective, and timely manner to mitigate the impacts of a discharge from the campus. This plan was prepared by the Environmental Health, Safety and Risk Management Office (EHSRM).

The plan was last updated in 2018 to add the addition of the Southeast Chill Plant, to add new units (generators, transformers and switches) that were added as part of newly completed buildings.

This update (2020) is to provide additional details regarding facility contacts; regulatory clarification for §112.7/112.8/112.12 requirements; update to tank closure and new generator, switch and transformer additions; and more detailed training and inspection protocols. Two outlying Texas State facilities previously included in this SPCC have been removed in this update. Although still under Texas State's administrative control, STAR Park has been removed from the plan, as it is below the SPCC storage threshold and is physically separated from the main campus. The second removal is the Round Rock Higher Education Center (now Texas State University Round Rock Campus), which is now covered under its own site-specific SPCC. Review and modifications are occurring prior to the 5-year review cycle in response to significant campus changes.

1.1 REGULATORY OVERVIEW AND APPLICABILITY

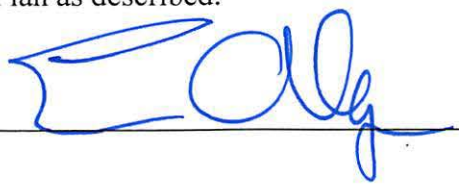
This SPCC Plan has been prepared and implemented in accordance with the SPCC requirements contained in 40 CFR Part 112. These regulations apply to Texas State because the total storage capacity of oil in above ground storage units (those that are greater than or equal to 55-gallons) is greater than 1,320 gallons. Oil includes, but is not limited to gasoline, diesel fuel, lubricating oils, mineral oil, petroleum based hydraulic oil, vegetable oils and oily wastes. **Table 1-1** (**Appendix A**) provides a cross reference of the 40CFR Part 112.7 requirements and the sections in this plan where they are addressed.

In addition to fulfilling requirements of 40 CFR Part 112, this SPCC Plan is used as a reference for oil storage information and testing records, as a guide on facility inspections and as a tool to communicate practices on preventing and responding to discharges with Texas State employees and contractors.

1.2 MANAGEMENT APPROVAL

Texas State is committed to maintaining the highest standards for preventing discharges of oil to navigable waters and the environment through the implementation of this SPCC Plan. This SPCC Plan has the full approval of Texas State management. Texas State's management has committed the necessary resources to implement the measures described in this Plan.

Mr. Eric Algoe, Vice President, Finance and Support Services, is the designated person accountable for oil spill prevention at Texas State and has the authority to commit the necessary resources to implement the Plan as described.

Signature 

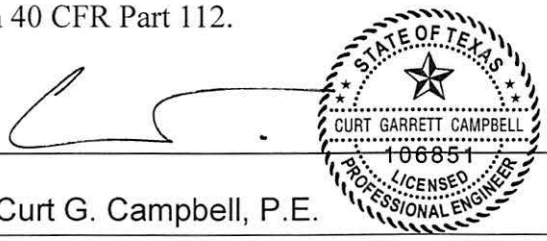
Name Eric Algoe

Title Vice President, Finance and Support Services

Date 4- 12- 2021

1.3 PROFESSIONAL ENGINEER CERTIFICATION

I certify under penalty of law that I am familiar with the requirements of 40 Code of Federal Regulation (CFR) Part 112; that I have examined the Texas State campus; and that I have reviewed the information submitted in this document. Based on my review of this document, I certify that this Spill Prevention, Control, and Countermeasure Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR part 112; that procedures for required inspections and testing have been established; and that this Plan is adequate for the facility. [112.3(d)]. This is contingent on Texas State's installation of additional equipment, implementation of the additional procedures, and completion of the other actions described in this plan. Certification of this document in no way relieves Texas State of the responsibility to fully implement this document and associated procedures and policies or to review, revise, or amend this document in accordance with 40 CFR Part 112.

Signature 

Name Curt G. Campbell, P.E.

Title VP Engineering & NR

Date 8/6/2020

1.4 PLAN REVIEW

In accordance with 40 CFR 112.5, Texas State periodically will review and evaluate this SPCC Plan for any change in the facility design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge. EHSRM will review and recertify this SPCC Plan at least once every five years. The review will include an evaluation of the plan's compliance with any SPCC rule revisions that have occurred since preparation of the plan or the last plan review.

Revisions to the Plan, if needed, will be made within six months of this five-year review. Texas State will implement any amendment as soon as possible, but not later than six months following preparation of any amendment. A registered PE will certify any technical amendment to the Plan, as described above, in accordance with 40 CFR 112.3(d). These include facility, plan, policy, or procedural modifications that require engineering judgment and include, but are not limited to the following:

- Variations in container or containment unit design or construction
- Modifications to transfer pipe and hose layouts such that the ability to discover a release is diminished or containment capacity documented herein is reduced
- Changes in product in an existing container unless the product characteristics are the same
- Changes in the container service (e.g. changes in pressure or temperature and removal of a container from service);
- Changes in procedures that would reduce the frequency of inspections, testing or preventative maintenance
- Changes in procedures or policies that would decrease the level of release prevention provided.

Scheduled five-year reviews and Plan amendments are recorded in **Table 1-2.** This log must be completed even if no amendment is made to the Plan. Unless a technical or administrative change prompts an earlier review, the next scheduled review of this Plan must occur by *June 2025.*

1.5 LOCATION OF SPCC PLAN

In accordance with 40 CFR 112.3(e), copies of the SPCC plan are located at both the Central Utility Plant (Central Plant) and EHSRM (Smith House). The Central Plant is responsible for most of the large oil storage units on campus. The address for Texas State is 601 University Drive, San Marcos, Texas 78666. The Central Plant was previously referred to as the Co-Generation Plant in prior versions of the SPCC Plan. Additional copies of the plan are found in other areas responsible for smaller volumes of oil and these are listed in **Table 2-1.**

1.6 CERTIFICATION OF SUBSTANTIAL HARM DETERMINATION

The following questions were taken from the SPCC Guidance Document for Regional Inspectors, EPA, December 16, 2013 to determine if a facility is required to develop a Facility Response Plan. If the answer to all questions is "No", then Texas State does not need to comply with the Facility Response Plan requirements in 40 CFR 112 Subpart D.

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 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 formula) 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 formula) such that a discharge from the facility would shut down a public drinking water intake?

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**

1.7 CERTIFICATION OF COMPLIANCE WITH 40 CFR 112.20

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. I certify that Texas State University-San Marcos does not exceed the quantity requirements specified in the substantial harm criteria and is not required to prepare a Facility Response Plan.

2.0 GENERAL FACILITY INFORMATION

2.1 CONTACT INFORMATION

The designated person accountable for overall oil spill prevention and response at the facility, also referred to as the facility's "Response Coordinator" (RC), is the Director of EHSRM. The 24-hour contact information is provided in **Table 2-1** in **Appendix A.**

Personnel from the Central Plant facility provide the day-to-day inspection and maintenance activities for the generators, transformers, switches and chemical storage tanks at the five utility plants on campus. The mechanics inspect, test and fill the numerous generators located on campus. The Physical Plant garage mechanics inspect and maintain the used oil tank and drums at the garage. The electricians at the Physical Plant and Central Plant inspect and maintain the transformers and switches throughout the campus. These key contacts for Texas State are included in **Table 2-1**.

2.2 FACILITY LAYOUT

Appendix B contains drawings showing the area location and site-specific information. As shown in the area location map (**Figure 2-1**), Texas State is located in San Marcos Texas, west of IH-35 and between Sessom Drive and Ranch Road 12. The site plan in **Figure 2-2** shows the location of the facility relative to waterways, roads, and inhabited areas. It also shows the general direction of stormwater surface flow. The headwater of the San Marcos River is at Aquarena Springs, located at Spring Lake on the northeast side of the campus.

The San Marcos River flows through the campus at Sewell Park. Sessom Creek is an intermittent spring fed creek that flows along Sessom Drive from North LBJ Drive to the confluence with the San Marcos River. Several ponds are located near University drive as remnants of an inactive fish hatchery. The ponds are now used in research and for aesthetics. Most of the campus is located on a hill and the flow is to Sessom Creek or University Drive then to the San Marcos River.

Oil storage occurs in fuel storage tanks (aboveground and underground), emergency generators, and transformers/switches. **Figure 2-3** is a detailed facility diagram that shows the locations of the aboveground storage tanks, underground storage tanks, and fuel transfer area. **Figure 2-4** shows the locations of the diesel-powered emergency generators with storage tanks greater than or equal to 55 gallons. The location of the transformers and switches with oil storage capacity of 55 gallons or more are shown in **Figure 2-5.**

Figure 2-6 shows the location of the oil storage units at Freeman Ranch, an offsite Texas State property. The Round Rock Campus, Texas State's other offsite property, is covered under its own SPCC, located onsite at the campus in Round Rock. Copies of that SPCC are also available at the EHSRM Office at The San Marcos main campus.

2.3 FACILITY OPERATIONS AND DRAINAGE PATHWAYS

The primary operation at Texas State is education. Steam and chill water provide heating and cooling to the campus by five plants: South, Central, East, Southeast and West. All of the plants have bulk chemical storage tanks for water treatment and the Central Plant has some fuel oil storage. Other support operations for the campus include emergency backup generators, and operational equipment including large transformers and switches.

As shown in the facility diagram (**Figure 2-2**), surface water flow from the west side of campus is primarily along Ranch Road 12 to Purgatory Creek, then to the San Marcos River. The flow enters the creek through underground stormwater piping located about 2 miles east of the campus near Guadalupe Street and the railroad tracks. The north and northeast side of campus drain toward Sessom Creek and then to the San Marcos River. Sessom Creek enters the San Marcos River near the intersection of Sessom Drive and Aquarena Springs Drive, just upstream of Sewell Park.

The center portion of the campus drains to stormwater inlets that carry the water to a large outfall in the San Marcos River downstream of Sewell Park and upstream of the Hopkins Street bridge. This portion of the San Marcos River is in Segment 1814 of the Guadalupe River Basin described as the Upper San Marcos River. This portion of the San Marcos River has protected endangered species and the water quality is designated "E" for exceptional aquatic life use, and "CR" for contact recreational use.

2.4 OIL STORAGE AND HANDLING

Aboveground Storage Tanks

Most of the oil storage at the facility is in aboveground storage tanks. At the Central Plant, there are two mobile truck mounted tanks used for refueling generators and some smaller tanks for new oil and used oil. The Physical Plant has one 385-gallon used oil tank and two portable generators with fuel storage. All fuel and oil storage tanks are shop-built and meet the American Petroleum Institute (API) tank construction standard. Their design and construction are compatible with the oil they contain and the temperature and pressure conditions of storage. The requirements of §112.8/112.12(c)(8) do not apply to the tanks on campus as they are all non-pressurized tanks and filled in batches by hand (i.e. not constant feed).

Underground Storage Tanks

There is only one underground storage tank, located at the Central Plant. The tank is empty and closed for any future service. The tank is a 2000-gallon steel tank that is double walled for secondary containment and is not buried or in any contact with soil. The requirements of §112.8/112.12(c)(3)(iv) that include corrosion protection for completely buried tanks do not apply to this tank. The engine, once used for electric power generation, has been dismantled as and removed as of January 2018. The air authorization for the engine has been allowed to expire.

Generators

Generators are located throughout campus for use as backup power. Some generators are trailer mounted and are portable and some are natural gas powered. The remaining generators have self-contained tanks inside the units and use diesel as fuel. The tank sizes range from 250 to 800 gallons.

Secondary containment for portable generators is provided by using either a pre-manufactured collapsible liner and braces, or a handmade version of heavy-duty plastic (50 to 100 mil) over berms, as required by 40 CFR §112.8/112.1(c)(11).

Transformers and Switches

Transformers, like generators, are located throughout the campus. The larger transformers hold from 300 to 800 gallons of mineral oil. There are several large switches on campus as well which hold approximately 240 gallons of mineral oil each. The Texas State University Utilities Department is slowly phasing out these medium voltage switches containing mineral oil to "air switches" containing no oils.

Cooking Oil Tanks and Grease Traps

The dining halls on campus are each equipped with both new and used cooking oil tanks and grease traps. The tanks store cooking oil and the oil is cleaned through filters until it is no longer satisfactory for use. It is then directed to used cooking oil tanks where it is picked up by a supplier. The systems in place are closed loop to prevent drips and spills that can be caused by manual transfers.

The grease traps are connected to the sanitary sewer and are below grade concrete tanks. These tanks are pumped on a routine schedule and overflow is minimized based on their design and maintenance.

In addition to these types of oil storage, there are also other forms of storage including drums (for used oil), portable truck mounted refueling diesel tanks, elevator motor tanks holding hydraulic oil, and a fire pump engine with a fuel tank.

Table 2-2 lists all the oil containers discussed above present at the Texas State with capacity of 55 gallons or more. This table also provides tank details and total volume of oil estimated to be stored on campus. The total amount is approximately 52,000 gallons.

2.5 PROXIMITY TO NAVIGABLE WATERS

Navigable waters as defined by 40CFR Part §110.1 include certain interstate lakes, rivers and streams (including intermittent streams). Navigable water may also be interpreted to include ground water if the ground water is hydraulically connected to surface waters and releases to ground water could potentially be discharged to surface water. At Texas State, Sessom Creek and the San Marcos River are located on campus.

2.6 CONFORMANCE WITH APPLICABLE STATE AND LOCAL REQUIREMENTS

State requirements for spills to the environment are found in 30 Texas Administrative Code (TAC) Chapter 327. This chapter describes the actions that the responsible party must take in response to a spill to the environment, but does not give specific spill prevention requirements.

Reportable quantities for spills of oil, petroleum products and used oil are in §327.4 and are:

1. 25-gallons for spills onto the land.
2. For spills to the waters of the state, any quantity to cause a sheen.

Reportable quantities of hazardous substances to soil and water are in 40CFR§ 302.4:

1. R.Q. for many chemicals are listed in Table 302.4.
2. R.Q. for non-hazardous chemicals (paint, ferric substances, food waste, etc.) is 100 pounds per 30TAC§327.4(2).

The City of San Marcos Industrial Waste Discharge Regulations (ordinance No. 2003-50, Section 86.129) also specifies spill protection requirements. This section protects the City's POTW by stating that "a user shall provide protection from accidental discharge of prohibited materials or other substances regulated by this division." This plan satisfies these local requirements.

The SPCC Plan was written to comply with 40 CFR Part 112 requirements which are more stringent than either the local or State requirements. All discharge notifications will be made in compliance with local, state, and federal rules.

3.0 SPILL RESPONSE AND REPORTING

The level of spill response and reporting will be determined by the type of spill that occurs. There are both incidental spills and non-incidental spills. These spills are described below to assist the responder carry out the correct actions.

3.1 INCIDENTAL (SMALL or MINOR) SPILLS

An incidental spill is defined as

- a small spill, less than 5 gallons
- of known composition
- one that does not enter a storm drain or cause a sheen on a surface water.
- one that does not exceed the EPA reportable quantity

For the purposes of this plan, an "incidental spill" is considered to be anything less than a 5-gallon spill of oil, used oil or other petroleum products. A spill may also be considered to

consist of any known hazardous substance (ie: acids, etc.) located at the Texas State which must be cleaned up for the protection of human health and the environment. General response procedures for these types of materials are addressed in **Appendix C** of this SPCC Plan, and further information may be available from EHSRM.

Cleanup personnel may utilize Personal Protective Equipment (PPE) such as rubber boots and Tyvek to reduce potential contamination. Cleanup will include absorbing the oil onto absorbent pads or using dry absorbent granule materials, placing it into a bag with a waste tag on it and calling EHSRM for pickup. A coating (manufacturer's recommended amount) of MicroBlaze® , a bioremediation agent, will also be applied by EHSRM and / or Texas State University Campus staff to further break down the residual oil if the spill is to land or other surface. MicroBlaze® will not be applied onto a natural water body.

3.2 NON-INCIDENTAL SPILLS

Non-incidental spills include the following:

- Spills that are larger than 5 gallons
- Spills that exceed the reportable quantity (defined as more than 25 gallons of oil onto land or more than enough to cause a sheen of oil on surface water).
- Spills where the regulatory reportable quantity is exceeded.
- Spills that may reach a water body through soil, storm drain, floor drains, and overland flow.

For non-incidental spills, the observer should attempt to stop the source of the release (if safely possible), isolate the spilled material (if feasible), and call the EHSRM office and 911.

EHSRM is responsible for coordinating cleanup efforts for non-incidental spills. The City of San Marcos Fire Department may support the spill response if requested by EHSRM and / or Texas State University staff. For illicit discharges to the MS4 or nearby waterways, contact City of San Marcos MS4 for notification within 24 hours of discovery. EHSRM will contact their contracted Spill Response Company for complete remediation and spill cleanup. EHSRM is responsible for notifying TCEQ of spills that exceed the reportable quantity to land or surface water.

3.3 EMERGENCY COORDINATOR/CALL SEQUENCE

Table 3-1 lists the names of the Emergency Coordinator and the designated alternate at Texas State along with contact information. The Emergency Coordinator is familiar with all aspects of the SPCC Plan, all operations and activities at the Texas State, the location and characteristics of oil storage locations and the facility layout. In addition, the Emergency Coordinator has the authority to commit the resources needed to carry out the SPCC.

Figure 3-1 shows the sequence of spill notification and the coordination that will occur in the event that assistance from outside emergency responders (city or contract) is requested. The

internal Texas State notification requirements and the regulatory and outside responder contacts are listed in **Table 3-1.**

3.4 VERBAL NOTIFICATION REQUIREMENT (LOCAL, STATE AND FEDERAL)

If the spill of oil is enough to cause a sheen on the local waterways (Sessom Creek, San Marcos River) or the spill exceeds 25 gallons to land (reportable quantities), the following regulatory agencies will be contacted within 24-hours by phone or fax:

- TCEQ 24-hour Emergency Spill Reporting (1-800-832-8224) CHEM-TEL
- Region 11 TCEQ (512-339-2929) during business hours (512) 339-3795 (fax)
- Hays County Local Emergency Planning Committee (LEPC) (512 393-7339)
- National Response Center (NRC) 1-800-424-8802

The fax form in **Figure 3-2** shows the information that will be submitted to comply with State and Federal requirements.

3.5 WRITTEN NOTIFICATION REQUIREMENT (LOCAL, STATE AND FEDERAL)

Within 30 days of the incident described in Section 3.4, the EHSRM office will submit a written report to the Regional TCEQ office. The written report will contain the faxed information and one of the following items, as applicable:

1. A statement that the discharge or spill response action has been completed and a description of how the response action was conducted.

2. A request for an extension of time to complete the response action, along with the reasons for the request. The request will also include a projected work schedule outlining the time required to complete the response action. The TCEQ may grant an extension of up to 6 months from the date of the spill or discharge was reported. Unless otherwise notified, by the appropriate regional manager, Texas State will proceed according to the terms of the projected work schedule.

3. A statement that the discharge or spill response action has not been completed nor is it expected to be completed within the maximum allowable six-month extension. The statement shall explain why completion of the response action is not feasible and include a projected work schedule outlining the remaining tasks to complete the response action. This information will also serve as notification that the response actions will be conducted under the Texas Risk Reduction Program rules in 30TAC Chapter 350.

3.6 REPORTING TO NATIONAL RESPONSE CENTER (FEDERAL REQUIREMENT)

If Texas State experiences a release of greater than or equal to 1000 gallons of oil, or two or more discharges of 42 gallons or more within a 12-month period, Texas State will provide information to the federal government's centralized reporting center, the National Response Center (NRC). EPA Region 6 will also be notified for releases to inland areas and waters that cause a sheen (reportable quantity). Calling the NRC within 24-hours of the release satisfies the reporting requirement to EPA.

A written report will be sent within 30 days to:

EPA Region 6
Prevention and Response Branch
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

EPA Region 6 may request an amendment to this plan to prevent future releases. Texas State will revise or amend the plan at EPA's request.

4.0 EMERGENCY EQUIPMENT

Texas State maintains safety equipment to respond to small incidental releases of oil (5-gallons or less). Texas State maintains a stock of supplies to assist the City of San Marcos Fire Department or outside contractors to respond to releases larger than 5-gallons. Texas State personnel stay in contact with one another and outside emergency services through the use of land-based phones and cell phones.

Table 4-1 lists the emergency response equipment maintained at Texas State. The location and capability of the equipment is also included in **Table 4-1**. Texas State waste pickup vehicle is equipped to respond to small releases across campus, while most of the same supplies are kept at the EHSRM office garage (Smith House), Thornton House garage, Container Accumulation Area by RF Mitte, or in any of the five utility plants.

5.0 EMERGENCY RESPONSE PROCEDURES

5.1 IMMEDIATE RESPONSE PROCEDURES

- Notify persons in the immediate area about the spill and evacuate non-essential personnel from the spill area that may be impacted by vapors or potential fire.

- If possible to do so safely, stop the source of the spill/release and turn off any nearby ignition sources.
- Isolate the spilled material.
- If applicable, and if safe to do so, try to block entry of the spill to storm drains, floor drains, creeks, or the San Marcos River.
- If the spill is incidental (see Section 3.1), clean up immediately. If you are not comfortable cleaning up the spilled material or not properly trained to do so, contact EHSRM (512-245-3616; or 512-738-6650 after hours).
- Notify supervisor and assess the situation. If backup or additional resources are needed, contact EHSRM and/or the Central Plant (512-245-2108). The Central Plant is responsible for most diesel storage areas on campus and has a call out list for other departments.
- If the spill is non-incidental (see Section 3.2), contact EHSRM. They will contact the emergency response contractor and any other necessary entities for additional assistance.

5.2 SPILL CONTAINMENT, CLEANUP AND DISPOSAL

Immediate action will be taken to confine the spill to the containment unit or to the immediate area. Spills captured by an oil/water separator will be contained by plugging drain lines in sumps and trenches; disengaging automatic sump pumps; placing temporary covers over drain inlets; etc. If a spill enters a drainage ditch, efforts will be made to confine the spill using dams, booms and absorbent material.

Once a spill has been contained, absorbent will be used to soak up the spill. The spill and absorbent will be placed in an open top drum or bagged. The spill will be cleaned up from the outer edges working inward. Rubber boots and Tyvek will be worn to reduce potential contamination of the cleanup personnel. A coating of MicroBlaze® will be applied to spills of oil, diesel, gasoline or other petroleum-based spills to decompose residual oil. The recovered material will be classified following Texas State's RCRA Waste Analysis Plan and disposed of offsite at a permitted facility.

6.0 SPILL PREVENTION AND COUNTERMEASURES PROVISIONS

6.1 POTENTIAL DISCHARGE VOLUME AND DIRECTION OF FLOW

The potential discharge volume of each storage unit is given in **Table 6-1. Figures 2-2 through 2-5** show the locations of the units across campus and the most likely direction of flow. In general those units on the southeast side of the campus (east of Comanche Street) will flow towards the San Marcos River at the outfall located across from the Theater Building. Units located on the north side of campus will flow to Sessom Creek and then to a retention pond near the Freeman Aquatic Building prior to entering the San Marcos River. Those located on the west

side of campus will flow through open ditches and underground piping toward Purgatory Creek (then to the San Marcos River) located about 3 miles east of the campus.

Oil containing units located on the southeast side of campus represent a larger potential of impacting the San Marcos River due to their close proximity and the absence of intercepting ponds or other stormwater detention units to divert the oil spill.

Table 6-1 provides a possible spill scenario for the oil containing units, the estimated volume of the spill and the direction of flow. Existing and proposed containment or diversionary structures are listed.

6.2 CONTAINMENT AND DIVERSION STRUCTURES

Secondary containment is provided for all of the above ground storage tanks located outside. **Table 6-2** lists the secondary containment volumes for the single-walled tanks and the calculations are in **Appendix C**. All above ground storage tanks installed after 2010 (grease tanks) have been located within containment.

Secondary containment is primarily in the form of concrete walls and floors surrounding the tanks. For the above ground new oil storage tanks (located at the Central Plant), the containment is adequate to contain the contents of the largest tank. This amount meets the most stringent guidance of the SPCC rule.

All generators that use diesel fuel on campus meet secondary containment requirements. New diesel operated generators are purchased with double walled fuel tanks including the two portable generators owned by the Electric Shop. Portable fuel tanks used to refill the generators and equipment are located inside the truck beds of the Central Plant mechanics' vehicles and are constantly visually monitored while in use.

Secondary containment is not required for electrical operating equipment (e.g. transformers and switches) or oil filled operating equipment (elevators) per 40 CFR 112.2. However, this equipment must meet the general requirements of 112.7 and is included in the regular inspection schedule.

Existing and future planned secondary containment complies with the facility drainage requirements in 40 CFR 112.8(b). These include design features such as use of manual open and close valves in containment walls or use of manually operated pumps to remove stormwater. The procedures for draining the concrete containment around the single-walled diesel fueled generators are in **Appendix E**. Records of containment drainage are maintained on an electronic recording form. A copy of the form is included in Appendix E.

All collected liquids must be visually monitored to ensure no oil sheen is present prior to discharge. Texas State uses secondary containment rather than designed facility drainage (112.8(b)(3)) to collect potential releases of oil. Diversion structures (ponds, concrete catch basins) are designed on campus for stormwater management, not oil spills.

Table 6-3 lists the locations of the grease traps and oil traps on campus. These units are associated with the dining halls or garages. The grease traps are concrete underground tanks with no secondary containment. The units are cleaned out on a regular basis shown in **Table 6-2.** These units along with the new and used cooking oil tanks are included in the inspection program to detect problems that could cause leakage or overfilling.

6.3 OVERFLOW PREVENTION MEASURES

Since the closure of the diesel storage tanks at the Central Plant and Physical Plant, the only tanks that are refilled with fuel or oil are the fuel tanks at the Freeman Ranch, the used oil tanks located at the Central Plant and the motor pool, and the diesel powered generators. Standard operating procedures for filling the fuel tanks are followed and include:

- A staff person oversees the filling (generally a mechanic).
- Fuel inventory in the storage tanks is visually monitored by both the campus personnel and the tanker operator.
- Drips that may occur during filling are caught in a bucket or on a pad and disposed of in an oily rag container at the Central Plant.
- The tanks do not have a high-level alarm per 40CFR 112.8/112.12(c)(8) so manual filling is the only method used. There is no use of automatic fuel pumping based on low- and high-level indicators. Tank fluid levels are monitored throughout the filling process.
- The requirements of §112.8/112.12(c)(8) do not apply to the tanks on campus as they are all non-pressurized tanks and filled in batches by hand (i.e. not constant feed).

6.4 INSPECTIONS, TESTS AND RECORDS

Inspections of all oil storage units listed in **Table 2-2** are performed on a monthly basis. Operating equipment (transformers, switches) is inspected on a quarterly basis. **Figures 6-1 through 6-6** show the checklists that are used for these inspections.

Data collected from the inspections are entered into an electronic database system and any deficiencies are noted. A primary responsible party is assigned to each oil storage unit and this party is contacted to correct any deficiencies found. The inspection forms and database are retained in the Texas State's environmental files.

During the last week of the month, the electronic inspection database is extracted for the month and prepared into a summary report. This report shows the units inspected, the personnel conducting the inspection and whether the unit passed or failed the inspection. The number of units inspected is compared to the actual number of units requiring inspection and the percent completed is calculated. If less than 100% completion is found, the missing inspections are identified and completed. Using this process, 100% of all units requiring inspection are completed.

Integrity Testing Procedures

Shop fabricated tanks and piping are subject to periodic integrity testing to determine the physical condition of the tank under the SPCC rule. The accepted industry standard for integrity testing is the Steel Tank Institute (STI) SP-001-03, *Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids*. This standard applies to all of the above ground steel tanks at Texas State storing diesel fuel and oil (meeting the definition of combustible and flammable).

Based on the current disposition of tanks stored at the Texas State University San Marcos campus, no tanks covered under this SPCC are required to undergo integrity testing.

7.0 PERSONNEL TRAINING

Under the SPCC regulations, all oil-handling employees at the facility are to receive annual training on the following:

- The operation and maintenance of equipment to prevent discharges
- Discharge procedure protocols
- Applicable pollution control laws, rules, and regulations
- General facility operations
- The contents of the facility SPCC Plan

Personnel working with oil should know the contents of the SPCC Plan and receive training to properly respond to spills in their work area. The EHSRM Office has developed a PowerPoint training program that addresses the elements listed above for the campus. The following offices were identified as having staff that potentially could handle oil or petroleum substances in their job duties:

- Facilities (Grounds, Utility Operations, Utility Maintenance, Garage, AC Shop, Electric Shop, Steam Shop)
- Auxiliary Services
- Contracted Services – Gruene Environmental (830-626-7575); National Response Corporation (formerly SWS/Eagle – 210-566-8366; TAS Environmental (512-990-9903).
- Department of Housing and Residential Life (Mechanics)
- Meadows Center (Grounds and Cutter Boat Operations)
- Freeman Ranch
- Campus Recreation (Golf Course Maintenance, Rec Sport Field Maintenance)
- Athletics (Field Maintenance)
- UPD (Garage, Fuel Powered Golf Carts)

Classroom training or computer-based training (SAP) is utilized to provide initial training when employees are hired followed by scheduled annual update training for each year. Training is accomplished through a variety of methods that may include:

- Classroom training with EHSRM instructors

- Classroom training with contracted instructors
- Classroom training with instructors from each department (EHSRM would "train-the-trainer")
- Computer training through the Texas State's SAP program

A form for documentation of training can be found as **Figure 7-1**. The tracking method for training is under development, but could include use of database-type programs, an Environmental Management System or other viable means. To increase awareness of the Plan within the Texas State University campuses, the SPCC program is included in the campus Public Safety and Health University Policy and Procedures (UPPS). This UPPS was developed by the EHSRM office in 2014 and includes many of the safety and environmental-related policies and procedures under one UPPS.

8.0 SECURITY

Security of oil containing units at Texas State is not accomplished by the structures described in 40 CFR 112.7g (fencing, locked gates, guard gates). Texas State is a public facility and is not secured in this manner. Alternative security features that provide equivalent environmental protection from vandalism of oil containing units are:

- Texas State is generally patrolled by the University Police Department during the day and night.
- The Central Plant is attended 24 hours a day, 7 days a week. Security and Plant personnel prohibit access to fuel storage areas to any unauthorized persons.
- Starter controls and fuel storage tanks in generators are generally behind locked panels.
- Operating controls for electrical equipment is located in locked buildings and oil storage (i.e. mineral oil) is behind locked panels.
- The campus is well lit.
- Campus security in general includes manned guard gates during normal operating hours to some parts of campus.

APPENDIX A

Tables

Revised May 2020

Table 1-1
Cross-Reference with SPCC Rule-Texas State University

Provision*	Plan Section	Page(s)
112.3(d)	Professional Engineer Certification	3
112.3(e)	Location of SPCC Plan	4
112.4	Plan Review by Regional Administrator	N/A
112.5	Plan Review by Owners or Operators	4
112.6	Reserved	N/A
112.7	Management Approval	2
112.7	Cross-Reference with SPCC Rule	A-1
112.7(a)(3)	General Information and Facility Diagram	6-7, B-1 – B-6
112.7(a)(3)(i)	Oil Storage Container and Oil Type	7-8, A-4 – A-7
112.7(a)(3)(ii)	Discharge Prevention Measures	13-15
112.7(a)(3)(iii)	Secondary Containment	14-15, C-1 – C-3
112.7(a)(3)(iv)	Countermeasure	14-15
112.7(a)(3)(v)	Methods of Disposal of Recovered Material	13
112.7(a)(3)(vi)	Telephone List for Emergency Response/Reporting	13, A-8 – A-9
112.7(a)(4)	Spill Response Format	B-8
112.7(a)(5)	Spill Response Procedures	9-10, 13
112.7(b)	Potential Discharge Volume and Direction of Flow	13, A-11 – A-18
112.7(c)	Containment and Diversionary Structures	14
112.7(d)	Contingency Plan if Secondary Containment is Not Applicable	N/A
112.7(e)	Inspections, Tests and Records	15-16
112.7(f)	Personnel Training and Discharge Prevention Procedures	16-17
112.7(7)(f)(2)	Designate a person at each facility who is accountable for discharge prevention	A3
112.7(g)	Security	N/A
112.7(h)	Tank Truck Unloading Procedures/Containment	N/A
112.7(i)	Field Constructed Tanks	N/A
112.7(j)	Conformance with Applicable State and Local Requirements	9
112.8/112.12(b)	Facility Drainage	N/A
112.8/112.12(c)(1)	Bulk Storage Containers – Materials of Construction	7
112.8/112.12(c)(2)	Bulk Storage Containers – Secondary Containment	16
112.8/112.12(c)(3)(iv)	Records retention for drainage of rainfall from containments	D-1 – D-2
112.8/112.12(c)(4)	Protect any completely buried tanks from corrosion	7
112.8/112.12(c)(5)	Bulk Storage Containers – Partially Buried	N/A
112.8/112.12(c)(7)	Bulk Storage Containers – Leakage Through Heating Coils	N/A
112.8/112.12(c)(8)	Requirements for continuous flow tanks (alarms, etc.)	7
112.8/112.12(c)(9)	Bulk Storage Containers – Efficient Treatment Facilities	N/A
112.8/112.12(c)(11)	Containment for Mobile Devices	14
112.8/112.12(d)	Facility Transfer Operations, Pumping and Facilities Process	N/A
112.20	Certification of Substantial Harm Determination	5

* Only relevant rule provisions are indicated. For a complete list of SPCC requirements, refer to the full text of 40 CFR part 112.

Table 1-2
Record of Plan Review and Changes - Texas State University

Date	Authorized Individual	Review Type	PE Certification	Summary of Changes
July 2008	Elizabeth Arceneaux	Initial Plan	Yes	N/A
August 2010	Elizabeth Arceneaux	Plan Update Technical	Yes	Contact information, change of service for 1000-gallon diesel tank, generator containment updates, and update inventory and locations of oil storage units. Page 10 Section 2.4 Page 14 Section 3.4 ,Page 15 Section 3.6 Page 18-19 Section 6.2, Page 19 Section 6.4 Table 2-1 Phone numbers, Table 2-2 Inventory updated with additional units Table 3-1 Updated phone numbers Table 4-1 Added Thornton House location for spill response supplies Table 6-1 and Table 6-2 Added new tanks and generators and updated containment status of all generators Figures 2-2, 2-3, 2-4, 2-5, 3-2 were all updated with new units. Figure 6-1 was replaced with individual inspection forms (Figures 6-1 through 6-6) Appendix D: Added Tank Integrity Report. Appendix E: Added secondary containment draining procedures.
February 2011	Elizabeth Arceneaux	Plan Update Technical	Yes	Appendix F: Added spill response procedures for chemical storage tanks on campus.
August 2012	Elizabeth Arceneaux	Plan Update Technical	Yes	Complete plan update Oil Storage Unit inventory to include new generators, transformers and switches, and to remove several above ground storage tanks of fuel and sulfuric acid. Added outlining facilities including freeman Ranch, STAR Park, and Round Rock Higher Education Center.
May 2014	Elizabeth Arceneaux	Plan Update Non-Technical	No	Clarification of regulatory requirements, training and inspection procedures, update of tank closures and addition of new generators, transformers and switches.
Jan. 2018	Lynn Lindsay	Plan Update Non-Technical	No	Clarification of regulatory requirements, update of tank closures and addition of new utility plant, generators, transformers and switches.
May 2020	Lynn Lindsay	Plan Update Technical	Yes	Complete plan update; verification of tanks and containments, transformers, generators, etc. Removal of STAR Park and Round Rock Campus (formerly Round Rock Higher Education Center).
April 2021	Lynn Lindsay	Plan Update Non- Technical	No	Bulk Chemical Storage Names Updated

Notes:

1. If changes are technical in nature, then a P.E. certification is needed. Non-technical changes (telephone numbers, page numbers, name changes, etc.) do not require a P.E. certification.
2. Plan must be reviewed every 5-years.

Table 2-1
Facility Contact Information
Texas State University

Department	Office Telephone	Address/Building	Plan Location
Facilities	512-245-2820 512-245-2518 512-245-2145	601 University Drive San Marcos, TX 78666 Physical Plant	Physical Plant (multiple offices)
Utilities Operations	512-245-2108 (24/7)	601 University Drive San Marcos, TX 78666 Central Plant	Central Plant South Plant East Plant West Plant
EHSRM	512-245-3616	601 University Drive San Marcos, TX 78666 Smith House	Smith House
Auxiliary Services	512-245-2585	601 University Drive San Marcos, TX 78666 LBJ Student Center	LBJ Student Center Room 3-2-5
DHRL	512-245-4680	601 University Drive San Marcos, TX 78666 DHRL	DHRL Building Maintenance Shops
Freeman Ranch	512-245-1515	2101 Freeman Ranch Road San Marcos, TX 78666 Freeman Ranch	Ranch Office
Meadows Center	512-245-7530	211 San Marcos Springs Drive San Marcos, TX 78666	Coordinator Spring Lake Operations

After hours and on weekends, the Control Room Operator (512-245-2108) can be contacted for on call mechanics, electricians, and shop support for the main campus.

Table 2-2
Inventory of Oil Storage Units (Greater Than 55-Gallon Capacity) Texas State University

Type	Location	Construction	Primary Content	Capacity (gallons)
Aboveground Storage Tank	Central Plant	Plastic	Used Oil	385
Working Tank (Day Tank by Engine)	Central Plant	Steel	New Oil	250
55-gallon drums (4)	Central Plant	Steel	Used Oil	55/each 220 total
Oil/Water Separator	Central Plant	Concrete	Waste Oil/water	18
Aboveground Storage Tank	Physical Plant Garage	Plastic	Used Oil	385
Generator with Separate Tank	Alkek Library	Steel	Diesel	500
Day Tank for Generator	Alkek Library	Steel	Diesel	56
Generator with built-in tank	Baseball Complex	Steel	Diesel	300
Generator with built-in tank	Bobcat Stadium West Side	Steel	Diesel	837
Generator with built-in tank	Centennial Hall	Steel	Diesel	200
Generator with built-in tank	Falls Sayers Housing	Steel	Diesel	400
Generator with built-in tank	Family and Consumer Science	Steel	Diesel	250
Generator with built-in tank	Flowers Hall	Steel	Diesel	100
Generator with built-in tank	Freeman Aquatic Building	Steel	Diesel	240
Generator with built-in tank	J.C. Kellam	Steel	Diesel	250
Engine with tank (fire pump)	Jackson	Steel	Diesel	100
Generator with built-in tank	LBJ Student Center	Steel	Diesel	200
Generator with built-in tank	Math Computer Science	Steel	Diesel	200
Generator with built-in tank	Mitte	Steel	Diesel	660
Generator with built-in tank	Moore St Housing	Steel	Diesel	400
Generator with built-in tank	Music Recital Hall / Edward Gary (3rd)	Steel	Diesel	300

Table 2-2
Inventory of Oil Storage Units
(Greater Than 55 -Gallon Capacity)
Texas State University
(Continued)

Type	Location	Construction	Primary Content	Capacity (gallons)
Generator with built-in tank	North Campus Housing Complex	Steel	Diesel	875
Generator with built-in tank	Nueces Hall	Steel	Diesel	460
Portable Truck to Fill Generators (2)	Central Plant Truck	Steel	Diesel	2 x 100 = 200
Portable Trailer Mounted Genset	Physical Plant	Steel	Diesel	250
Portable Trailer Mounted Genset	Physical Plant	Steel	Diesel	103
Generator with built-in tank	President's House	Steel	Diesel	100
Generator with built-in tank	South Chill Plant/ Edward Gary (7th)	Steel	Diesel	250
Generator with built-in tank	Strahan Coliseum	Steel	Diesel	100
Generator with built-in tank	Supple Science/RFM	Steel	Diesel	250
Generator with built-in tank	Undergraduate Academic Center	Steel	Diesel	300
Generator with built-in tank	Avery Building, RRHEC	Steel	Diesel	200
Generator with built-in tank	Nursing School, RRHEC	Steel	Diesel	500
RTE Switches (high voltage switches, oil filled)	Campus	Steel	Mineral Oil	240 (avg); multiple units onsite
Transformers	Campus	Steel	Mineral Oil	322 (avg); multiple units onsite

Table 3-1
Hazardous Waste Spill Notification References
Texas State University

LOCAL RESPONSE TEAM					
POSITION/TITLE	**NAME**	**RESPONSE TIME**	**OFFICE**	**HOME**	**CELL**
Emergency Coordinator **University Police (receives all 911 calls made from campus)**	Asst. Chief of Police	15 minutes	On campus dial 911 (512) 245-8336		
Emergency Coordinator Alternate	On Call Environmental Health and Safety Specialist	30 minutes	(512) 245-3616	(512) 738-6550 (on call)	(512) 738-6550 (on call)
Emergency Coordinator Alternate Backup	EHSRM	15 minutes	(512) 245-3616		(512) 738-6650 (on call)
Additional Resources/Support **(maintains list of Texas State Contacts and home numbers)**	**CENTRAL PLANT**	15 minutes	(512) 245-2108		

AGENCY	OFFICE	ALTERNATE
National Response Center (NRC)	(800) 424-8802	(202) 267-2675
TCEQ 24-hour Environmental Release Hotline (Chem-Tel, Inc.)	(800) 832-8224	
City of San Marcos Fire Department Emergency Management Coordinator (LEPC)	911	(512) 393-8460
Texas Commission on Environmental Quality Region 11	(512) 339-2929	(512) 339-3795 (fax)
Texas Commission on Environmental Quality - Central Office	(800) 832-8224 (24 Hrs. Chem-Tel, see above)	(800) 832-8224 (24 Hrs. Chem-Tel, see above)
AGENCY	**OFFICE**	**ALTERNATE**
U.S. Fish and Wildlife Service (USFWS)	(512) 490-0057	
U.S. Environmental Protection Agency (EPA) – Region VI	(866) 372-7745	(214) 665-6428
Texas Parks and Wildlife Department (TPWD)	(512) 389-4848	(512) 912-7154
Texas Department of State Health Services	(512) 458-7111	1-888-963-7111
Texas Highway Patrol (Department of Public Safety)	911	(512) 353-7000

Table 3-1
Hazardous Waste Spill Notification References
Texas State University
(Continued)

COMPANY	OFFICE	ALTERNATE
Gruene Environmental Companies	(830) 626-7575	
LCRA Environmental Lab Services	(512) 730-6022	(877) 362-5272
SWS Environmental Services	(210) 566-8366	(877) 742-4215
TAS Environmental	(210) 496-5310	(817) 535-7222
San Antonio Testing Laboratory	(210) 229-9920	

SERVICE	PRIMARY	ALTERNATE
Hays County Sheriff	911	(512) 393-7896
Police Department	911	(512) 753-2108
Fire Department	911	(512) 393-8464
Parks and Recreation (Environmental Dept)	(512) 393-8400	(512) 393-8410
Wastewater Treatment Plant	(512) 393-8010	(512) 393-8344
San Marcos Hays County EMS/Ambulance Service	911	(512) 353-5115
Central Texas Medical Center	911	(512) 353-8979

Table 4-1
List of Emergency Response Equipment/Locations
Texas State University

Name of Equipment	Locations							
	Smith House	**Thornton House**	**Central Plant**	**East Plant**	**West Plant**	**South Plant**	**South East Plant**	**CAA Waste Bldg**
1. Pads Universal (minimum 3 boxes)	X	X	X	X	X	X	X	X
2. Pads Oil Only (minimum 3 boxes)	X	X	X	X	X	X	X	X
3. Boom Oil Only (3 foot) (minimum 3 boxes)	X	X	X	X	X	X	X	X
4. Boom Universal (3 foot) (minimum 3 boxes)	X	X	X	X	X	X	X	X
5. Boom Oil Only (6 foot)	X	X						
6. Soda Ash (minimum 5 25-pound buckets)	*1	*1	X					*1
7. Dry absorbent (minimum 100 pounds)	X							X
8. Open top 30-gal or 55-gal drums (minimum 2)	X	X						X
9. Miscellaneous supplies (shovels, gloves, goggles, bags, buckets)	X	X						X

Notes:

*1 Small quantities

X Required

The Central Plant also has a supply of lime.

The Physical Plant Garage has dry absorbent.

Table 6-1
Potential Discharge Volume and Direction of Flow for Oil Storage Units Texas State University

Name/Location	Fuel Tank Size (gal)	Type of Failure	Maximum Discharge Rate (gal/hour)	Maximum Volume (gal)	Direction of Flow	Containment or Diversion Structures
Tanks						
1. AST Used oil tank/Central Plant	385	leak in seam	1	48	N/A contained	Double walled tank provides secondary containment
2. AST working tank with new oil/Central Plant	250	valve left open	250	250	N/A contained	Concrete secondary containment
3. Oil/Water separator	2,300	leak in underground concrete tank	1	2300	ground water	None
4. AST Used oil tank/ Physical Plant	385	leak in seam	1	48	N/A contained	Double walled tank provides secondary containment.
5. AST Fuel Storage Tank at Freeman Ranch - Diesel	1000	Catastrophic		1000	N/A	Double walled tank with additional concrete containment.
6. AST Fuel Storage Tank at Freeman Ranch - Gasoline	500	Catastrophic		500	N/A	Double walled tank with additional concrete containment.
7. Grease Tank Harris Dining Hall	110	Catastrophic		110	N/A	Tank located inside a plastic containment.

Table 6-1
Potential Discharge Volume and Direction of Flow for Oil Storage Units
Texas State University (Continued)

Name/Location	Fuel Tank Size (gal)	Type of Failure	Maximum Discharge Rate (gal/hour)	Maximum Volume (gal)	Direction of Flow	Containment or Diversion Structures
Cooking Oil Tanks						
1. Jones New and Used Cooking Oil	(3) 186	leak	1	24	N/A located inside	Located indoors and spill would be noticeable and attended to promptly
2. Harris New and Used Cooking Oil	(2) 186	leak	1	24	N/A located inside	Located indoors and spill would be noticeable and attended to promptly
3. Den - ASB South New and Used Cooking Oil	(2) 186	leak	1	24	N/A located inside	Located indoors and spill would be noticeable and attended to promptly
4. LBJ Student Center New and Used Cooking Oil	(2) 186	leak	1	24	N/A located inside	Located indoors and spill would be noticeable and attended to promptly
5. Commons-New and Used Cooking Oil Tanks	(2) 186	leak	1	24	N/A located inside	Located indoors and spill would be noticeable and attended to promptly

Table 6-1
Potential Discharge Volume and Direction of Flow for Oil Storage Units
Texas State University (Continued)

Name/Location	Fuel Tank Size (gal)	Type of Failure	Maximum Discharge Rate (gal/hour)	Maximum Volume (gal)	Direction of Flow	Containment or Diversion Structures
Generators						
1. Alkek Library	500 +56 gal day tank	leak	1	556	Flow to drain in loading dock and then southeast to the San Marcos River	Double walled tank and concrete containment (2009)
2. LBJ Student Center	200	leak	1	200	East then to a storm sewer that flows southeast to the San Marcos River	Double walled tank
3. Nueces Hall	460	leak	1	460	South then southeast toward the San Marcos River	Double walled tank and concrete containment (2009)
4. Jackson Well	100	leak	1	100	A leak from the tank would be contained with the tray. A leak from the hoses could drain to the Thomas Rivera street and possibly north to Sessom Creek.	Adequate containment provided by metal tray for tank.
5. Flowers Hall	100	leak	1	100	South across Bobcat Trail then into a storm drain along Edward Gary and southeast to the San Marcos River	Concrete containment (2009)
6. JC Kellam	250	leak	1	250	Flow to the north and east into the JCK parking lot and east toward Sessom Creek.	Concrete containment (2009)

Table 6-1
Potential Discharge Volume and Direction of Flow for Oil Storage Units
Texas State University (Continued)

Name/Location	Fuel Tank Size (gal)	Type of Failure	Maximum Discharge Rate (gal/hour)	Maximum Volume (gal)	Direction of Flow	Containment or Diversion Structures
Generators (continued)						
7. Strahan Coliseum	100	leak	1	100	Flow is to the north and west to the San Marcos River.	Double walled tank
8. Centennial Hall	200	leak	1	200	Flow is to the north then east to Sessom Creek	Concrete containment (2009)
9. Supple Science Bldg.	250	leak	1	250	Flow is south then into a stormwater inlet. The flow is then directed west to a small stormwater detention pond.	Concrete containment (2009).
10. Math Computer Science Building	200	leak	1	200	Flow is to north towards Pickard Street then possibly to Sessom Creek	Double walled tank
11. Baseball Complex	300	leak	1	300	N/A contained	Double walled tank
12. West End Zone of Bobcat Stadium	837	leak	1	837	N/A contained	Double walled tank
13. Family and Consumer Science	250	Leak	1	250	N/A contained	Double walled tank
14. Undergraduate Academic Center	300	Leak	1	300	N/A contained	Double walled tank
15. North Campus Housing Complex	875	Leak	1	875	N/A contained	Double walled tank

Table 6-1
Potential Discharge Volume and Direction of Flow for Oil Storage Units
Texas State University (Continued)

Name/Location	Fuel Tank Size (gal)	Type of Failure	Maximum Discharge Rate (gal/hour)	Maximum Volume (gal)	Direction of Flow	Containment or Diversion Structures
Generators (continued)						
16. RF Mitte Building	660	Leak	1	660	N/A contained	Double walled tank
17. Freeman Aquatic Building	240	Leak	1	240	N/A contained	Double walled tank
18. Portable Trailer Mounted Generator (2) Physical Plant	100X2	Leak	1	200	N/A contained	Double walled tank
19. Portable Truck mounted Fuel Tank for filling generator fuel tanks	100X2	Leak	1	200	N/A contained	Contained in truck bed
22. Edward Gary Garage Roof	300	Leak	1	300	N/A contained	Double walled tank
23. Edward Gary Garage 3rd floor	250	Leak	1	250	N/A contained	Double walled tank
24. West Campus Housing	400	Leak	1	400	N/A contained	Double walled tank

Table 6-1
Potential Discharge Volume and Direction of Flow for Oil Storage Units
Texas State University (Continued)

Name/Location	Fuel Tank Size (gal)	Type of Failure	Maximum Discharge Rate (gal/hour)	Maximum Volume (gal)	Direction of Flow	Containment or Diversion Structures
Grease Traps						
1. Harris Dining Hall	1,250	overfilling and surface runoff	10	100	Overflow would be to a storm drain inlet and south into a grassy area (Glade)	Scheduled disposal and cleaning program
2. Jones Dining Hall	2,000	overfilling and surface runoff	10	100	Overflow from either trap would flow into the loading dock then to a storm drain inlet. The inlet leads to the storm sewer that discharges to the San Marcos River near the Theater Building.	Scheduled disposal and cleaning program
3. Commons Dining Hall	4,000	overfilling and surface runoff	10	100	Overflow would be south along Commons Bldg. and into the parking lot. Overflow could enter bldgs below upper retaining wall.	Scheduled disposal and cleaning program
4. LBJ Student Center	4000	overfilling and surface runoff	10	100	Overflow would be southeast and enter storm drain by Alkek Library service driveway. Storm sewer would take flow to either Sessom creek or to the San Marcos River.	Scheduled disposal and cleaning program

Table 6-1
Potential Discharge Volume and Direction of Flow for Oil Storage Units
Texas State University (Continued)

Name/Location	Fuel Tank Size (gal)	Type of Failure	Maximum Discharge Rate (gal/hour)	Maximum Volume (gal)	Direction of Flow	Containment or Diversion Structures
Grease Traps **(continued)**						
5. The Den-ASB South	1,000	overfilling and surface runoff	10	100	Overflow would be south and east between ASB and JCK buildings. Probably not to any storm sewer inlets.	Scheduled disposal and cleaning program
6. Paws N Go	60	overfilling and surface runoff	10	60	Overflow would be a small enough volume to not reach any stormwater inlets.	Scheduled disposal and cleaning program

Table 6-1
Potential Discharge Volume and Direction of Flow for Oil Storage Units
Texas State University (Continued)

Name/Location	Fuel Tank Size (gal)	Type of Failure	Maximum Discharge Rate (gal/hour)	Maximum Volume (gal)	Direction of Flow	Containment or Diversion Structures
DRUM STORAGE AREAS						
1. DSA UPD Garage on RR12	6x55= 330gal	Catastrophic	N/A	330	N/A	Drums on Containment
2. DSA Central Plant Upstairs	2x55= 110 gal	Catastrophic	N/A	110	N/A	Drums on Containment
3. DSA Jackson Water Well	2x55= 110 gal	Catastrophic	N/A	110	N/A	Drums on Containment
4. DSA Physical Plant Wash Bay	55	Catastrophic	N/A	55	N/A	Drums on Containment
5. DSA Physical Plant Garage – new oil	2x55= 110 gal	Catastrophic	N/A	110	N/A	Drums on Containment
6. DSA Physical Plant Warehouse	6x55= 330gal	Catastrophic	N/A	330	N/A	Drums on Containment
7. DSA Meadows Center Cutter Boat	55	Catastrophic	N/A	55	N/A	Drums on Containment
8. DSA Golf Course Maintenance Shed	2x30= 60 gal	Catastrophic	N/A	60	N/A	Drums on Containment

Table 6-2
Secondary Containment of Oil Storage Units

Name/Location	Fuel Tank Size (gal)	Secondary Containment	Notes
Tanks			
1. AST Used oil tank/Central Plant	385	Double walled tank	Adequate secondary containment.
2. AST working tank with new oil/Central Plant	250	located inside in concrete containment. 3.5'W x 0.8'D x 13.7'L x 7.48 gal/cf = 287 gal	Adequate containment, do not have to consider rainfall.
3. Oil/Water separator	2,300	Underground concrete tank	No containment/pumped annually
4. Used oil tank/Physical Plant	385	Double walled tank	Adequate secondary containment
5. AST for new cooking oil - Commons Dining Hall	186	None, but located inside, fiberglass	Inspected weekly, and serviced by an outside contractor
6. AST for used cooking oil - Commons Dining Hall	186	None, but located inside, fiberglass	Inspected weekly, and serviced by an outside contractor
7. Jones New Cooking Oil	(2) 186	None, but located inside, fiberglass	Inspected weekly, and serviced by an outside contractor
8. Jones Used Cooking Oil	186	None, but located inside, fiberglass	Inspected weekly, and serviced by an outside contractor
9. Den - ASB South New Cooking Oil	186	None, but located inside, fiberglass	Inspected weekly, and serviced by an outside contractor
10. Den - ASB South Used Cooking Oil	186	None, but located inside, fiberglass	Inspected weekly, and serviced by an outside contractor
11. LBJ Student Center New Cooking Oil	186	None, but located inside, fiberglass	Inspected weekly, and serviced by an outside contractor

Table 6-2
Secondary Containment of Oil Storage Units (continued)

Name/Location	Fuel Tank Size (gal)	Secondary Containment	Notes
Tanks **(continued)**			
12. LBJ Student Center Used Cooking Oil	186	None, but located inside, fiberglass	Inspected weekly, and serviced by an outside contractor
13. Harris Dining New & Used Cooking Oil	186X2	None, but located inside, fiberglass	Inspected weekly, and serviced by an outside contractor
14. Harris Dining Grease Tank	110	Located inside a plastic secondary containment tray	Grease tank emptied quarterly by outside contractor. Containment drained to grease traps after each rain.
15. Freeman Ranch	1,000	Double walled tank and piping located inside concrete containment (tertiary containment)	Inspected monthly. Leak detection checked monthly on stand-pipe.
16. Freeman Ranch	500	Double walled tank and piping located inside concrete containment (tertiary containment)	Inspected monthly. Leak detection checked monthly on stand-pipe.

Table 6-2
Secondary Containment of Oil Storage Units (continued)

Name/Location	Fuel Tank Size (gal)	Secondary Containment	Notes
Generators			
1. Alkek Library	500+56 gal day tank	Located inside [(8.3' x 18.3') - (16' x 8')] x 0.6' x 7.48 gal/cf = 108 gal.	Aboveground Storage Tank (rectangular) in Building by Jones Cafeteria. Upgrade containment by 2010. Upgraded completed 2009
2. LBJ Student Center	200	Located Outside [(15.5 ft x 7.2 ft) - (10.5 ft x5.2 ft)] x 0.4 ft x7.48 gal/cf = 170 gal	Open drain in containment wall, needs to be plugged. Upgrade containment by 2010. Not necessary, double walled tank.
3. Nueces Hall	460	Located Outside [(19.8' x 12.5') - (12.4' x 5.9')] x 0.5' x 7.48 gal/cf = 652 gal	Parking Lot behind Nueces, near Retama, in alley. Holes in containment wall. Repair by December 2008. Double walled tank, repairs made to containment in 2009.
4. Jackson Well	100	(6.0' x 3' x 2.5') x 7.48 gal/cf = 337 gal.	Runs fire pump/engine not a generator. Located inside a building. Tank has a rectangular metal tray beneath it. Adequate containment.
5. JC Kellam	250	Located Outside (14.83 x 10.34 x 0.5) x 7.48 gal/cf = 573 gal.	Could drain to ponds or Sessom Creek. Upgrade containment by 2009. Upgraded in 2009.
6. Strahan Coliseum	100	Located outside, no containment	Upslope of San Marcos River at Sewell Park. Upgrade containment by 2009. Not necessary – double walled tank.

Table 6-2
Secondary Containment of Oil Storage Units (continued)

Name/Location	Fuel Tank Size (gal)	Secondary Containment	Notes
Generators (continued)			
8. Centennial Hall	200	Outside, no containment	Between the parking garage and Centennial, on Pleasant Street. Drains to Pleasant Street and then Sessom Creek. Upgrade containment by 2009. Upgraded in 2009.
9. Supple Science Bldg.	250	Outside, no containment	On south side, on walkway, off parking lot. Within 15 feet of a City drinking water well and upslope of a stormwater inlet. Upgrade containment by 2009. Upgraded in 2009.
10. Math Computer Science Building	250	Outside, no containment	Upgrade containment by 2010. Not necessary, double walled tank.
11. Baseball Complex	300	Double walled tank.	None
12. West End of Bobcat Stadium	837	Double walled tank	None
13. Rec Sport	Natural Gas	not required	None
14. Sterry Hall	Natural Gas	not required	None
15. Facilities	Natural Gas	not required	None

Table 6-2
Secondary Containment of Oil Storage Units (continued)

Name/Location	Fuel Tank Size (gal)	Secondary Containment	Notes
Generators (continued)			
16. Facilities	Trailer mounted diesel	<55 gallons, not required	None
17. Facilities	Trailer mounted portable 250 gallon	Not required.	None
18. Facilities	Trailer mounted portable 100 gallon	Double walled tank	None
19. Family and Consumer Science	250	Double walled tank	None
20. Undergraduate Academic Center	300	Double walled tank	None
21. North Campus Housing Complex	875	Double walled tank	None
22. RF Mitte Building	660	Double walled tank	None

Table 6-2
Secondary Containment of Oil Storage Units (continued)

Name/Location	Fuel Tank Size (gal)	Secondary Containment	Notes
Generators (continued)			
23. Freeman Aquatic Biology	240	Double walled tank	None
24. Portable Truck Mounted Fuel Tanks	100X2	Spill kits kept on truck	None
28. Edward Gary Garage Roof	300	Double walled tank	None
29. Edward Gary Garage 3rd Floor	250	Double walled tank	None
30. West Campus Housing	400	Double walled tank	None

Table 6-2
Secondary Containment of Oil Storage Units (continued)

Name/Location	Fuel Tank Size (gal)	Secondary Containment	Notes
Grease Traps			
1. Harris Dining Hall	1,250	In-ground concrete tank, no containment	Pumped out on a 45-day cycle
2. Jones Dining Hall	2,000	In-ground concrete tank, no containment	Pumped out on a 45-day cycle
3. Commons Dining Hall	4,000	In-ground concrete tank, no containment	Pumped out on a 45-day cycle
4. LBJ Student Center	4000	In ground concrete tank, no containment	Pumped out on a 120-day cycle
5. The Den-ASB South	1,000	In-ground concrete tank, no containment	Pumped out on a 45-day cycle
6. Paws N Go	60	N. Guadalupe Street Back of Store	Pumped out on a 90-day cycle

Table 6-2
Secondary Containment of Oil Storage Units (continued)

Name/Location	Fuel Tank Size (gal)	Secondary Containment	Notes
DRUM STORAGE AREAS			
1. DSA UPD Garage on RR12	6x55 = 330gal	Located on a drum spill containment platform.	Located Inside
2. DSA Central Plant Upstairs	2x55 = 110 gal	Located on a drum spill containment platform.	Located Inside
3. DSA Jackson Water Well	2x55 = 110 gal	Located on a drum spill containment platform.	Located Inside
4. DSA Physical Plant Wash Bay	55	Located on a drum spill containment platform.	Located Inside
5. DSA Physical Plant Garage – new oil	2x55 = 110 gal	Located on a drum spill containment platform.	Located Inside
6. DSA Physical Plant Warehouse	6x55 = 330gal	Located on a drum spill containment platform.	Located Inside
7. DSA Aquarena Springs Cutter Boat	55	Located on a drum spill containment platform.	Located outside under a roof.
8. DSA Golf Course Maintenance Shed	2x30 = 60 gal	Located on a drum spill containment platform.	Located Inside

Table 6-3
Location and Details of Grease Traps
Texas State University

Building	Tank Size (gal)	Address	Construction	Pump Cycle (days)	Location
1. Harris Dining Hall	1,250	100 Moore Street	concrete	45	Rear of building
2. Jones Dining Hall	2,000	100 W. Woods Street	concrete	45	Woods Street
3. Harris Dining Hall Grease Tank	40	100 W. Moore Street	Steel	120	Rear of building by dumpsters
4. Commons Dining Hall	4,000	205 E. Woods Street	concrete	45	West side of building
5. LBJ Student Center	4000	Student Center Drive	concrete	120	Northeast side near the loading dock
6. The Den-ASB South	1,000	260 Old Main	concrete	60	Rear of ASB
7. UAC Cafe	60	429 Guadalupe Street	steel	90	NW corner of UAC building

APPENDIX B

Figures

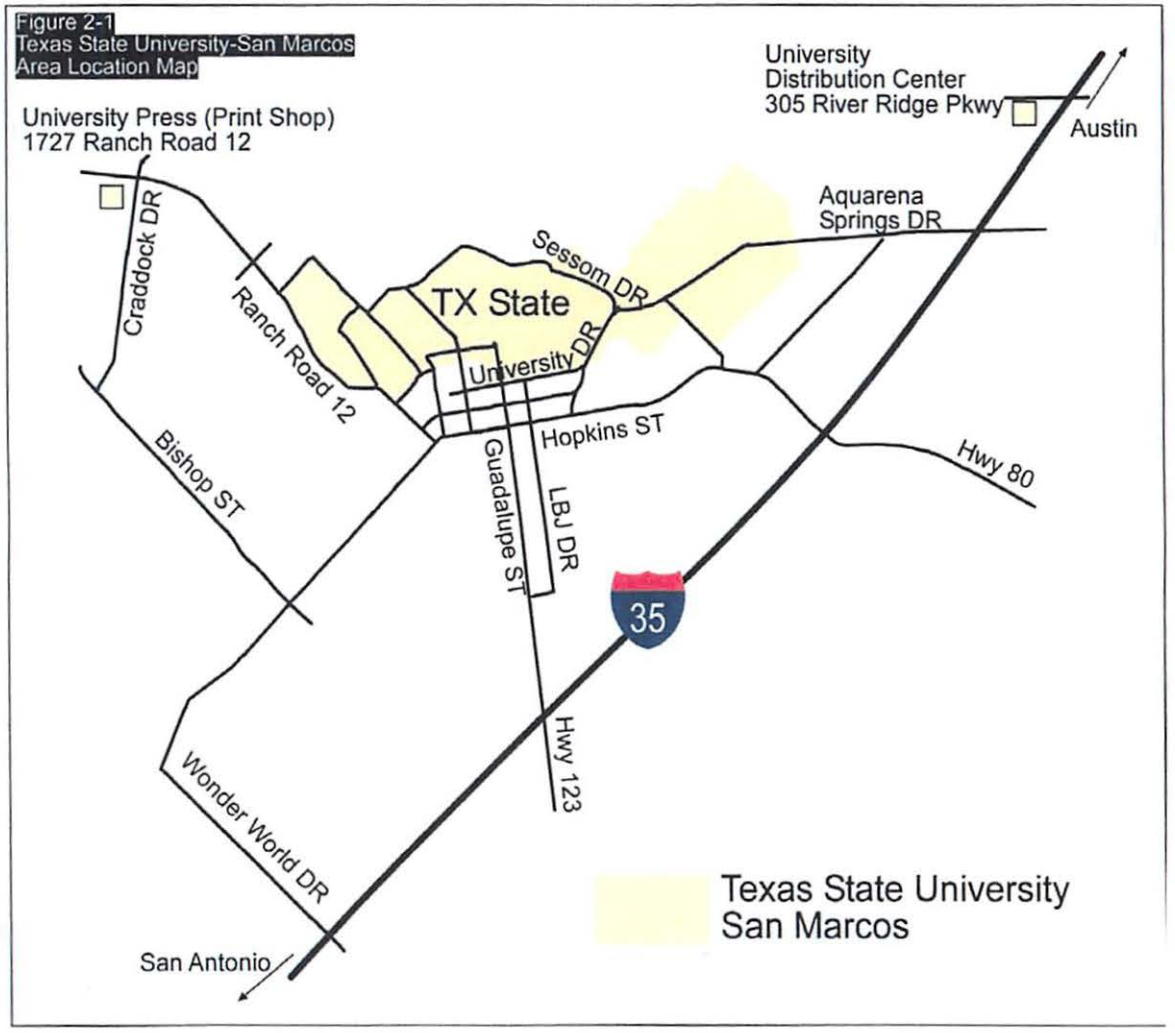


Figure 2-1
Texas State University-San Marcos
Area Location Map
University Press (Print Shop)
1727 Ranch Road 12
University
Distribution Center
305 River Ridge Pkwy
Austin
Aquarena
Springs DR
Sessom DR
TX State
University DR
Craddock DR
Ranch Road 12
Bishop ST
Hopkins ST
Guadalupe ST
LBJ DR
Hwy 80
35
Hwy 123
Wonder World DR
San Antonio
Texas State University
San Marcos


N
Direction of Flow
Overland


N
3000-Gallon Used Oil UST
1500-Gallon Oil AST
250-Gallon Oil AST
385- Gallon Used Oil AST
Transfer Facility
(2) 20,000-Gallon Diesel AST (EMPTY) CLOSED
385-Gallon Used Oil AST
Tank Location
AST= Above Ground Storage Tank
UST= Underground Storage Tank
Transfer Facility


N
Generator Location
Generator Double Walled Location


N
Transformer Location
Switch Location
City Owned Transformer

FREEMAN RANCH
FIGURE 2-6

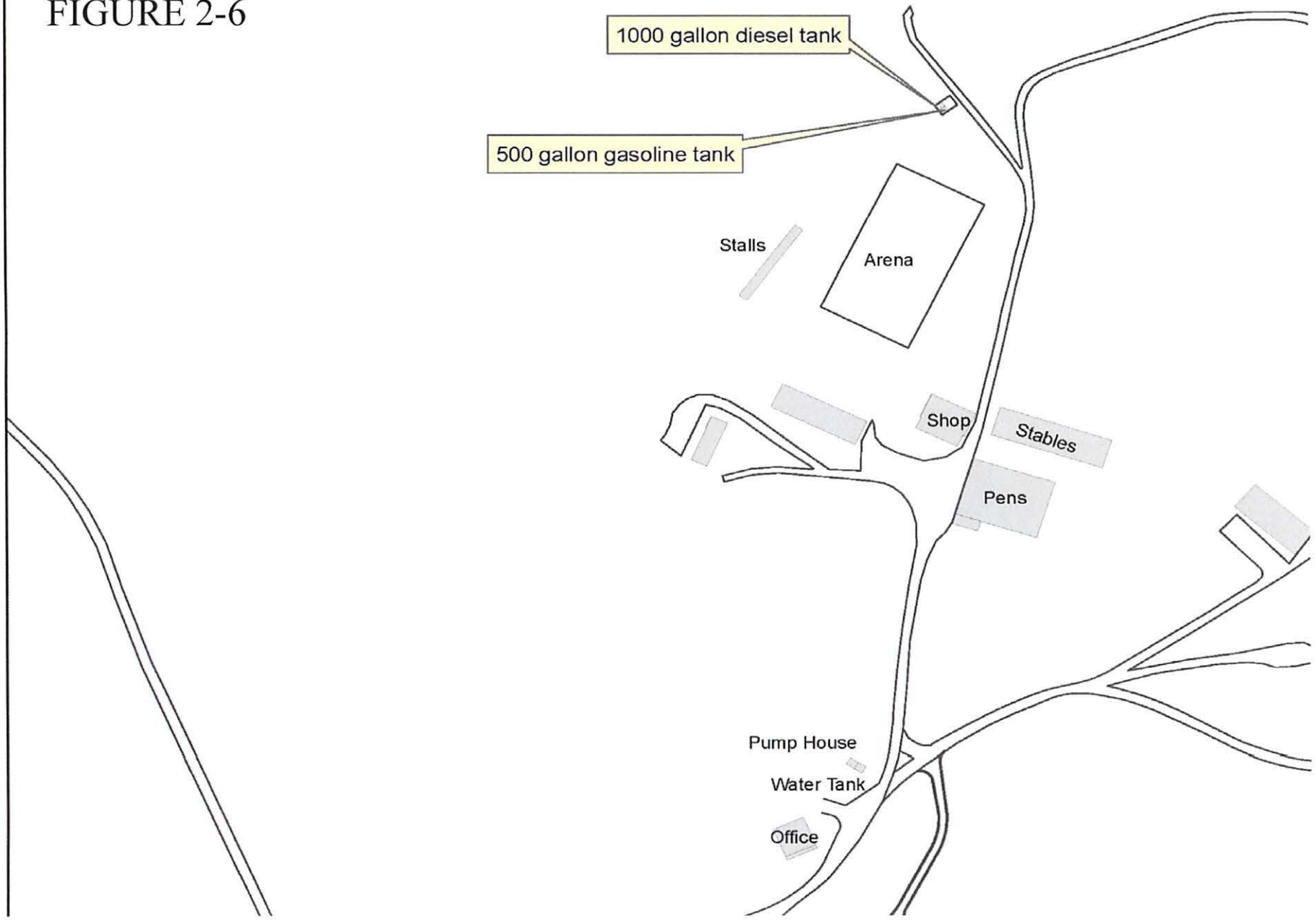


Figure 3-1
Spill Notification Sequence
Texas State University-San Marcos

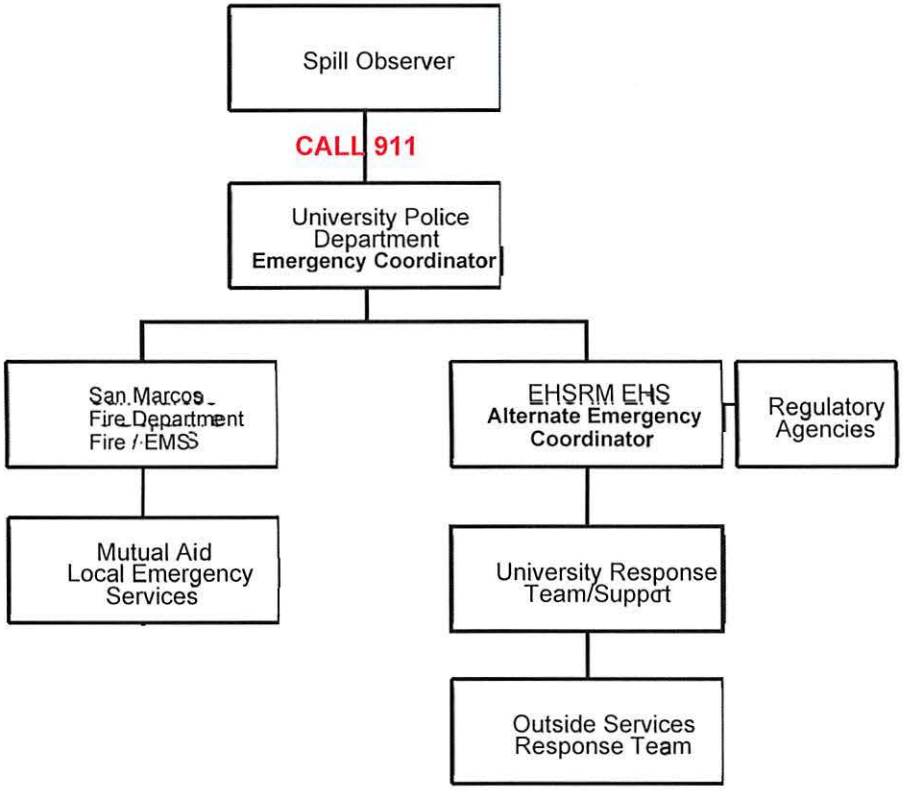


Figure 3-2
24-Hour Notice of Spill/Release Report Form
Texas State University-San Marcos

TEXAS STATE UNIVERSITY
SAN MARCOS
The rising STAR of Texas™

24-Hour Notice of a
Spill/Release
Report Form

Texas Commission on Environmental Quality
24-Hour Hotline: 800-832-8224
Region 11 Office (normal business hours): 512-339-2929, 512-339-3795 (fax)
National Response Center: 800-424-8802

Person Making Notification

Name: _____ Phone #: _____

Spill Information

Date: _____ Time: _____ Location: _____

Description of Spill Substance: _____

Quantity (estimate): _____ Duration: _____

Source: _____

Waters Affected: _____
(i.e. San Marcos River, Blanco River, etc...)

Water Pollution/ Environmental Impact: _____
(Description of the extent of actual or potential impact)

Sensitive areas/ Natural Resources at risk: _____

Responsible Person(s)

Name: _____ Phone #: _____

Name: _____ Phone #: _____

Contact Person

Name: _____ Phone #: _____

Figure 3-2
24-Hour Notice of Spill/Release Report Form
Texas State University-San Marcos

TEXAS STATE UNIVERSITY
SAN MARCOS
The rising STAR of Texas™

24-Hour Notice of a
Spill/Release
Report Form

Description of corrective actions:	

Anticipated Health Risks:	

Identity of any Governmental Representatives responding to spill or discharge:

Name	Organization

Other information that may be significant to the response action:

Figure 6-1
Above ground Storage Tank Checklist
Texas State University-San Marcos

Zone: 4

Physical Plant

Located in Garage Wash Bay

Above Ground Storage Tanks (AST)

782-002

Used Oil Tank

	YES	NO	N/A
1. There is no indication of leakage or spillage around the tanks?	☐	☐	☐
2. The pipe connections show no evidence of leakage or deterioration?	☐	☐	☐
3. Access to the tanks is not prevented by stored material or debris?	☐	☐	☐
4. The tanks are not displaying settlement, cracking, or pitting?	☐	☐	☐
5. The exterior coatings of the tanks do NOT require maintenance, cleaning, or painting?	☐	☐	☐
6. The normal and emergency tank vents do NOT require cleaning or maintenance?	☐	☐	☐
7. There is no evidence of damage or corrosion to the tanks support structures?	☐	☐	☐
8. There is no evidence of cracking in the dispenser lines?	☐	☐	☐
9. There is no leakage in the pump dispenser container pan.	☐	☐	☐
10. There is no liquid in the inspection pipe between the primary and secondary tank walls.	☐	☐	☐

Comments: _____

_____

_____

Completed By: _____ Date: _____

Environmental Health, Safety & Risk Management

Page 1 of 1

Figure 6-2
Drum Storage Area Checklist
Texas State University-San Marcos

Zone: 1

UPD Garage

Located Near Print Shop

Drum Storage Area (DSA)

645-001

New and Used Drums

	YES	NO	N/A
1. The containers show no signs of spillage on their tops or sides require cleaning?	☐	☐	☐
2. The containers do not show signs of leakage or deterioration?	☐	☐	☐
3. Are used oil collection drums less than ¾ full?	☐	☐	☐
4. Are containers capped properly?	☐	☐	☐
5. Are used oil drums labeled as used oil?	☐	☐	☐
6. Are the tops of the containers clear of surplus or junk materials?	☐	☐	☐
7. Are the drums provided with secondary containment?	☐	☐	☐
8. There is no evidence of liquid in the secondary containment?	☐	☐	☐

Comments: _____

_____

_____

_____

_____

Completed By: _____ Date: _____

Environmental Health, Safety
& Risk Management

Page 1 of 1

Figure 6-3
Generators Checklist
Texas State University-San Marcos

Zone: 3

J.C. Kellam

Generator Inspection

694-001

Generator Located By Loading Dock – 250 Gallon Diesel

	YES	NO	N/A
1. There is no evidence of fuel leakage from the fuel tank or any fuel lines / hoses?	☐	☐	☐
2. The inspector did not remove debris or accumulated water from containment?	☐	☐	☐
3. Is the generator located inside a secondary containment constructed to contain the fuel tank contents?	☐	☐	☐
4. The containment is not breached (i.e. holes in sides of wall)?	☐	☐	☐

Comments: _____

_____

_____

_____

_____

Completed By: _____ Date: _____

Figure 6-4
Transformer/ Switches Checklist
Texas State University-San Marcos

Zone: 1

San Marcos Hall

East of San Marcos Hall - Outside

Transformers and Switches (XFR)

314-XF-83

Transformer

	YES	NO	N/A
1. There is no evidence of leakage?	☐	☐	☐
2. There is no evidence of rust/ graffiti or unit deterioration?	☐	☐	☐
3. There is no evidence of physical damage (dents, crushed metal, etc.)?	☐	☐	☐
4. There is no vegetation within 12 feet of door or 3 feet of sides?	☐	☐	☐

Comments: _____

_____

_____

_____

_____

Completed By: _____ Date: _____

Environmental Health, Safety
& Risk Management

Page 1 of 1

Figure 6-5
Vegetable Oil & Grease
Collection Containers Checklist
Texas State University-San Marcos

Zone: 3

Commons Dining Hall

Underground Grease Trap Near Loading Dock On South Side

Vegetable Oil and Grease Collection Containers (VGC)

601-001

Grease Trap

	YES	NO	N/A
1. There is NO evidence of leakage or spillage around the tanks or containers?	☐	☐	☐
2. There is NO evidence of the tank or piping leaking?	☐	☐	☐
3. Is the tank or container is less than ¾ full?	☐	☐	☐
4. The containers are capped properly?	☐	☐	☐

Comments:

Completed By: _____ Date: _____

Environmental Health, Safety
& Risk Management

Page 1 of 1

Figure 6-6
Above Ground Storage Tank Checklist
Texas State University-San Marcos

Figure 6-6
Above Ground Storage Tank Checklist
Texas State University-San Marcos

Zone: 1

Freeman Ranch

Located 0.75 miles NE of Intersection of Fulton and Freeman Ranch Road

Above Ground Storage Tanks (AST)

788-01

1000 Gallon Off Road Diesel Tank –Double Walled

	YES	NO	N/A
1. There is NO evidence of leakage or spillage around the tanks?	☐	☐	☐
2. The pipe connections show NO evidence of leakage or deterioration?	☐	☐	☐
3. There is NO debris piled up around the tanks preventing easy access?	☐	☐	☐
4. There is NO evidence of settlement, cracking, or pitting of the tanks?	☐	☐	☐
5. The exterior coatings of the tanks do NOT require maintenance, cleaning, or painting?	☐	☐	☐
6. The normal and emergency tank vents do NOT require cleaning or maintenance?	☐	☐	☐
7. There is NO evidence of damage or corrosion to the tanks support structures?	☐	☐	☐
8. There is NO evidence of cracking in the dispenser lines?	☐	☐	☐
9. There is NO leakage in the pump container pan.	☐	☐	☐
10. There is NO liquid in the inspection pipe between the primary and secondary tank walls.	☐	☐	☐

Comments: _____

_____

_____

Completed By: _____ Date: _____

Environmental Health, Safety
& Risk Management

Page 1 of 1

Figure 7-1
Training Record
Texas State University-San Marcos

TEXAS STATE UNIVERSITY
SAN MARCOS

Attendance Sheet

Title: _____ **Length:** _____

RMS Number: _____ **Date:** _____

PLID/SID	PRINT NAME	SIGNATURE	DEPARTMENT
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			
___Student ___Staff ___Faculty			

Facilitator:

_____ Print Name

_____ Signature

Rev. B

Page ____ of ____

APPENDIX C

Secondary Containment Volume Calculations

Calculations - Secondary Containment

Generators

1. Alkek Library - 500 gallon diesel tank
   Located inside so required volume does not include rainfall.
   Available Volume = (*entire area – pad area*) x *height of containment*
   Available Volume = [(8.3 *ft* x 18.3 *ft*) – (8 *ft* x 16 *ft*)] x 0.6 *ft*
   Available Volume = [(152 ft^2 – 128 ft^2) x 0.6 *ft* = 14.4 ft^3
   Liquid Volume = 14.4 ft^3 x 7.48 *gal*/ft^3 = 108 *gallons*

   Does containment volume meet 100% container size? NO

2. LBJ Student Center - 200 gallon diesel tank
   Available Volume = (*entire area – pad area*) x *height of containment*
   Available Volume = [(15.5 *ft* x 7.2 *ft*) – (10.5 *ft* x 5.2 *ft*)] x 0.4 *ft*
   Available Volume = [(111.6 ft^2 – 54.6 ft^2) x 0.4 *ft* = 22.8 ft^3
   Liquid Volume = 22.8 ft^3 x 7.48 *gal*/ft^3 = 170 *gallons*

   Does containment volume meet 100% container size? NO
   Also containment wall has a 2-inch or larger hole in one side.
   Correction for August 2010 Update: Tank is double walled. Meets Requirements

3. Nueces Hall – 460 gallon diesel tank
   Available Volume = (*entire area – pad area*) x *height of containment*
   Available Volume = [(19.8 *ft* x 12.5 *ft*) – (12.4 *ft* x 5.9 *ft*)] x 0.5 *ft*
   Available Volume = [(247.5 ft^2 – 73.2 ft^2) x 0.5 *ft* = 87.2 ft^3
   Liquid Volume = 87.2 ft^3 x 7.48 *gal*/ft^3 = 652 *gallons*

   Does containment volume meet 100% container size? YES
   Containment is adequate with repairs.
   Correction for August 2010 Update: Tank is double walled. Meets Requirements.

4. Jackson Well Emergency Fire Pump - 100 gallon diesel tank is located inside so required volume does not include rainfall.
   Rectangular tank located under fuel tank.
   Available Volume = 6 *ft* x 2.5 *ft* x 3 *ft* = 45 ft^3
   Liquid Volume = 45 ft^3 x 7.48 *gal*/ft^3 = 337 *gallons*

   Does containment volume meet 100% container size? YES
   Does containment volume meet 110% container size? YES Containment is adequate.

5. All other Generators DO NOT have secondary containment.

Hypothetical Secondary Containment Dimensions:
Most generators are 250 - gallon tank size. Rule requires containment of 110% so need to contain 275 gallons (to allow for rainfall).

- Assume berm height of containment is 6 inches (0.5 ft).
- Assume width (W) is 7 feet.

$$Volume = 275 \text{ gal} \times 1 \text{ ft}^3/7.48 \text{ gal} = 36.8 \text{ ft}^3$$

$$Volume = L \times W \times H = 36.8 \text{ ft}^3$$

$$Length = 36.8 \text{ ft3} / (7 \text{ ft} \times 0.5 \text{ ft})$$

$$\text{Length} = 10.5 \text{ ft}$$

$$\underline{So\ typical\ dimensions} = 7 \text{ ft} \times 10.5 \text{ ft} \times 0.5 \text{ ft}$$

August 2010 Update: All generators meet secondary containment requirements.

Based on a review of all generators, the following generators have double walled tanks:

- LBJ Student Center
- Math Computer Science
- Nueces
- Strahan
- Bobcat Stadium Endzone
- Baseball Complex
- Family and Consumer Science Annex

The following had secondary containment added with concrete bottom and curbing in 2009/2010:

- JC Kellam
- Centennial
- Alkek (containment and double –walled tank)
- Supple Science
- Flowers Hall

Aboveground Tanks

1. Central Plant - 250 Gallon Working Oil Tank

   Located inside so required volume does not include rainfall.

   Available Volume = 13.7 *ft* x 3.5 *ft* x 0.8 *ft* = 38.4 ft^3

   Liquid Volume = 38.4 ft^3 x 7.48 gal/ft^3 = 287 *gallons*

   Does containment volume meet 100% container size? YES

Appendix D

Generator Secondary Containment Draining Procedures

Procedures for Emptying Rainwater from Secondary Containment

The following generators have concrete secondary containment designed to capture the full volume of diesel from the generator fuel tank:
JCK, Centennial, Flowers Hall, Supple Science, and Nueces. Nueces also has a double walled fuel tank. It already had a concrete containment of adequate volume and a valve was added to the hole in the side of the tank to make it functional.
To keep the containment available for a fuel release, the following procedures are followed after a rainfall event:

1. Within 24 to 48 hours of a rainfall event, inspect the containment for oily sheen.
2. If no sheen or oil discharge is apparent, open the valve and allow the rain water to discharge to the ground. If necessary use a broom or other device to empty all of the water from the containment.
3. Close and lock the valve.
4. If an oily sheen is present, attempt to remove it using oil only sorbent pads. Take the pads to EHSRM for disposal.
5. If excessive oil or diesel is present on the water, transport oily water to the oil/water separator at the Central Plant.

Record of Rainfall Management from Secondary Containment

Rainfall Date	Inspection Date	Inspector	Generator Inspected	Oily Sheen Present	No: Drain to ground	Yes: Pump Out to Separator at Central Plant
Insert Date	Insert Date	Name	JCK, Cent., Flowers, etc.	Yes or No	Insert Date	Insert Date

Appendix E

Chemical Storage and Spill Response Plan

Chemical Storage and Spill Response Plan
Texas State University – San Marcos

I. INTRODUCTION

The purpose of this Spill Prevention Plan is to describe measures implemented by Texas State University-San Marcos (Texas State) to prevent chemical discharges from occurring, and to prepare Texas State to respond in a safe, effective, and timely manner to mitigate the impacts of a discharge from the campus. This plan was prepared by the Environmental Health, Safety and Risk Management Office (EHSRM).

II. CHEMICAL STORAGE TANKS

Chemical storage tanks are located inside buildings on campus and contain primarily water treatment chemicals. The chemicals treat:

- Closed chill water and hot water loops
- Boiler water
- Cooling tower water
- Potable well water
- Swimming pool water

Table F-1 lists the tanks on campus that store chemicals. All of the tanks have secondary containment adequate to contain the entire contents of the tank. Some of the drum storage areas need secondary containment. This list will be updated at least annually to reflect changes that occur or to include new tanks found during inspections and discovery.

Inspection of these tanks and drums occur on a periodic basis to determine:

- If the tanks or drums are intact and there is no sign of leakage
- If the dispenser lines are intact and there is no sign of leakage
- If secondary containment is provided for the tank, drum and dispenser lines
- If the tank integrity testing or tank replacement necessary (upon damage or every ten years)
- If liquid is present in the containment
- If the spill response materials are located near the tank or drum storage areas.

Figure F-1 shows a typical chemical storage tank inspection form. Inspections are done electronically in the field and the report is sent with any violations to the responsible party immediately.

III. CHEMICAL SERVICE AREAS

Chemical service areas are locations on campus where small amounts of chemical may be used to maintain equipment periodically. These locations may also have one or more floor drains to the sanitary sewer. For example, mechanical rooms may have chemicals such as heat exchanger cleaner (acid) and small 5-gallon containers of water treatment chemical. Waste chemicals may also be present.

This inspection program will be phased in over the next two years due to the potential magnitude of the number of locations and relatively small amount of chemical stored. Dorm mechanical rooms will be investigated during 2011 and other mechanical rooms will be added in 2012.

Inspection of these areas will occur on a periodic basis to determine:

- If chemical containers or waste containers are present
- If there is more than one of each type of container present (more than one is considered too many).
- If the secondary containment is provided for the containers
- If incompatible chemicals are separated in separate containment (i.e. organic chemicals and acids or bases will not be mixed)
- If the containers are in good condition and if the containers have a lid and it is in place
- If the spill response materials are located in the area.

IV. SPILL RESPONSE:

The main method of avoiding spill response is ***spill prevention***. Good chemical handling practices, periodic inspections and having secondary containment is key to preventing spills.

If a spill occurs, the level of response and reporting is determined by the type of spill that occurs. Texas State defines spills as incidental spills and nonincidental spills.

INCIDENTAL SPILLS

- a small spill, less than 5 gallons
- of known composition
- one that does not enter a storm drain, sanitary sewer drain or cause a sheen on a surface water.
- one that does not exceed the EPA reportable quantity

Cleanup Procedures:

- wear protective gloves, safety glasses and respiratory protection if necessary
- absorb the chemical onto pads or granular absorbent
- place pads into a bag or bucket with a lid
- attach a waste tag on the container or bag and call EHSRM for pickup
- neutralize acid spills with soda ash, baking soda or lime and pick up dry material with a shovel or broom and put in a bucket with a lid and waste tag

NON INCIDENTAL SPILLS

- spills that are larger than 5 gallons
- spills that exceed the reportable quantity (i.e. more than 25 gallons of oil onto land or more than enough to cause a sheen of oil on surface water)
- spills where the regulatory reportable quantity is exceeded (EHSRM will advise)
- spills that may enter the environment through soil, water, storm drain, floor drains

Spill Response:

- attempt to stop the source of the release, if possible, in a safe manner n block storm drains or floor drains, if possible n call the EHSRM office 5-3616 and 911.
- for acid spills, apply a berm of lime or soda ash to isolate the outward flow of the spill
- Texas State has a contract Emergency Response company as the primary responder and will provide spill response with the assistance of EHSRM and the City of San Marcos Fire Department.

More detailed procedures for spill response are in Sections 3, 4, and 5 of the SPCC Plan. These procedures given above will provide immediate help with a spill situation. Follow-up activities are generally required especially for non-incidental spills. The EHSRM office will assist with all reporting and follow-up activities.

V. TANK INTEGRITY TESTING/TANK REPLACEMENT

The chemical storage tanks are primarily totes made of plastic or stainless steel. These tanks have a replacement policy by the chemical vendors of once every ten years. If visual inspections show signs of deterioration, more frequent replacement will occur.

VI. EMERGENCY RESPONSE SUPPLIES

Emergency response supplies are located at the West, East, Central, and South Plants as well as the Smith (EHSRM office) and Thornton House garages. Smaller spill kits are stationed in strategic locations near the chemical storage tanks and are supplied with absorbent, waste tags and safety equipment. These emergency supply locations are checked during the tank inspections to determine if restocking is necessary.

Table E-1

Bulk Chemical Storage Tank Locations

Texas State University- San Marcos

Location	Product No.	Application	CAS#	Hazardous Substances	%	Tank Serial #	Container Size (gallons)	Tank Type
Central Plant 817-CT-01	TWT-4920	Water Treatment	3710-84-7	Diethylhydroxylamine	2.0-10.0	40733	165	Plastic
Central Plant 817-CT-02	TWT-4010	Water Treatment	1310-73-2	Sodium Hydroxide	30.0-60.0	910667	165	Plastic
Central Plant 817-CT-03	TWT-4236	Water Treatment	1310-58-3	Potassium Hydroxide	15.0-30.0	909645	165	Plastic
			37350-42-8	Acrylic Acid/ Sulfonic Acid Copolymer	5.0-10.0			
			9003-04-7	Polyacrylic Acid, sodium salt	15.0-20.0			
Central Plant 817-CT-04	TWT-4410	Water Treatment	108-91-8	Cyclohexylamine	10.0-20.0	912516	220	Plastic
			100-38-7	Diethylaminoethanol	10.0-20.0			
			110-91-8	Morpholine	10.0-20.0			
Central Plant 817-CT-05	TWT-2478	Water Treatment	1310-58-3	Potassium Hydroxide	10.0-20.0	34970	165	Plastic
			37971-36-1	2-phosphonbutane-1,2,4-tricarboxylic acid	5.0-10.0			
			2809-21-4	1-Hydroxyethylidene 1,1-diphsophonic acid	2.0-5.0			
Central Plant 817-CT-06	TWT-Memcide 550	Water Treatment	10377-60-3	Magnesium Nitrate	1.40-2.0	909662	165	Plastic
			2682-20-4	2-Methyl-4-isothiazolin-3-one	0.35-0.45			
			26172-55-4	5-chloro-2-methyl-4-isothiazolin-3-one	1.1-1.135			
			7786-30-3	Magnesium Chloride	1.0-1.2			
Central Plant 817-CT-07	TWT-2258	Deposit Cleaner	1310-73-2	Sodium Hydroxide	2.0-10.0	909646	165	Plastic
			64665-57-2	Sodium Tolytriazole	1.0-3.0			

Table E-1

Bulk Chemical Storage Tank Locations

Texas State University- San Marcos

Location	Product No.	Application	CAS #	Chemical Composition	%	Tank Serial #	Container Size (gallons)	Tank Type
Central Plant 817-CT-10	WRICO Sodium Hypochlorite	Wricochlor/ Bleach	7681-52-9	Sodium Hypochlorite	12.5	N/A	250	Plastic
			7647-14-5	Sodium Chloride	9.0-10.0			
			1310-73-2	Sodium Hydroxide	0.5-2.0			
Central Plant 817-CT-13	Sulfuric Acid	Acid Tank	7664-93-9	93% Sulfuric Acid	93	N/A	500	Plastic
East Plant 733-CT-01	TWT-2258	Water Treatment	1310-73-2	Sodium Hydroxide	2.0-10.0	909661	120	Plastic
			64665-57-2	Sodium Tolytriazole	1.0-3.0			
East Plant 733-CT-02	TWT-Memcide 550	Water Treatment	10377-60-3	Magnesium Nitrate	1.40-2.0	909647	165	Plastic
			2682-20-4	2-Methyl-4-isothiazolin-3-one	0.35-0.45			
			26172-55-4	5-chloro-2-methyl-4-isothiazolin-3-one	1.1-1.135			
			7786-30-3	Magnesium Chloride	1.0-1.2			
East Plant 733-CT-03	TWT-2478	Water Treatment	1310-58-3	Potassium Hydroxide	10.0-20.0	75265	165	Plastic
			37971-36-1	2-phosphonbutane-1,2,4-tricarboxylic acid	5.0-10.0			
			2809-21-4	1-Hydroxyethylidene 1,1-diphsophonic acid	2.0-5.0			

Table E-1

Bulk Chemical Storage Tank Locations

Texas State University- San Marcos

Location	Product No.	Application	CAS #	Chemical Composition	%	Tank Serial #	Container Size (gallons)	Tank Type
East Plant 733-CT-04	Sodium Hypochlorite	WricochlorMax	7681-52-9	Sodium Hypochlorite	12.5	N/A	250	Plastic
			7647-14-5	Sodium Chloride	9.0-10.0			
			1310-73-2	Sodium Hydroxide	0.5-2.0			
East Plant 733-CT-05	Sulfuric Acid	Acid Tank	7664-93-9	93% Sulfuric Acid	93	910705	150	Plastic
South Plant 861-CT-01	ChemCal SA100	Sulfuric Acid	7664-93-9	93% Sulfuric Acid	93	106622	220	Plastic
South Plant 861-CT-02	WRICO Sodium Hypochlorite	Wricochlor/ Bleach	7681-52-9	Sodium Hypochlorite	12.5	106621	220	Plastic
			7647-14-5	Sodium Chloride	9.0-10.0			
			1310-73-2	Sodium Hydroxide	0.5-2.0			
South Plant 861-CT-03	TWT-2478	Cooling Water Treatment	1310-58-3	Potassium Hydroxide	10.0-20.0	106907	165	Plastic
			37971-36-1	2-phosphonbutane-1,2,4-tricarboxylic acid	5.0-10.0			
			2809-21-4	1-Hydroxyethylidene 1,1-diphsophonic acid	2.0-5.0			
South Plant 861-CT-04	TWT-Memcide550	Microbicide	10377-60-3	Magnesium Nitrate	1.40-2.0	107407	65	Plastic
			2682-20-4	2-Methyl-4-isothiazolin-3-one	0.35-0.45			
			26172-55-4	5-chloro-2-methyl-4-isothiazolin-3-one	1.1-1.135			
			7786-30-3	Magnesium Chloride	1.0-1.2			
South Plant 861-CT-05	TWT-2258	Cooling Tower Internal Treatment	1310-73-2	Sodium Hydroxide	2.0-10.0	106908	165	Plastic
			64665-57-2	Sodium Tolytriazole	1.0-3.0			
South Plant 861-CT-06	ChemCal 1560	Biocide	26172-55-4	3(2H)-Isothiazolone, -choloro-2methyl-	1.11	106908	65	Plastic
			2682-20-4	3(2H)-Isothiazolone, 2-methyl-	0.39			
			3251-23-8	Cupric nitrate	<1.0			
West Plant 790-CT-01	TWT-Memcide550	Cooling Tower Chemical/Corrosion Inhibitor	10377-60-3	Magnesium Nitrate	1.40-2.0	173790	120	Plastic
			2682-20-4	2-Methyl-4-isothiazolin-3-one	0.35-0.45			
			26172-55-4	5-chloro-2-methyl-4-isothiazolin-3-one	1.1-1.13			
			7786-30-3	Magnesium Chloride	1.0-1.2			

Table E-1

Bulk Chemical Storage Tank Locations

Texas State University- San Marcos

Location	Product No.	Application	CAS #	Chemical Composition	%	Tank Serial #	Container Size (gallons)	Tank Type
West Plant 790-CT-02	TWT-2478	Cooling Tower Chemicals	1310-58-3	Potassium Hydroxide	10.0-20.0	909408	165	Plastic
			37971-36-1	2-phosphonbutane-1,2,4-tricarboxylic acid	5.0-10.0			
			2809-21-4	1-Hydroxyethylidene 1,1-diphsophonic acid	2.0-5.0			
West Plant 790-CT-03	TWT-4410	Boiler Chemicals	108-91-8	Cyclohexylamine	10.0-20.0	910665	220	Plastic
			100-38-7	Diethylaminoethanol	10.0-20.0			
			110-91-8	Morpholine	10.0-20.0			
West Plant 790-CT-04	TWT-2258	Closed Loop Chemicals	1310-73-2	Sodium Hydroxide	2.0-10.0	910664	165	Plastic
			64665-57-2	Sodium Tolytriazole	1.0-3.0			
West Plant 790-CT-05	TWT-4612	Boiler Chemicals	7631-90-5	Sodium Bisulfite	39.0-41.0	910661	120	Plastic
West Plant 790-CT-06	TWT-4920	Boiler Chemicals	3710-84-7	Diethylhydroxylamine	2.0-10.0	910666	165	Plastic
West Plant 790-CT-07	TWT-4236	Boiler Chemicals	1310-58-3	Potassium Hydroxide	15.0-30.0	910660	165	Plastic
			37350-42-8	Acrylic acid/Sulfonic acid Copolymer	5.0-10.0			
			9003-04-7	Polyacrylic acid, sodium salt	15.0-20.0			
West Plant 790-CT-08	TWT-4010	Boiler Chemicals	1310-73-2	Sodium Hydroxide	30.0-60.0	104974	165	Plastic
West Plant 790-CT-09	Sulfuric Acid	Cooling Tower Chemicals	7664-93-9	Sulfuric Acid	93%	N/A	300	Plastic

Table E-1

Bulk Chemical Storage Tank Locations

Texas State University- San Marcos

Location	Product No.	Application	CAS #	Chemical Composition	%	Tank Serial #	Container Size (gallons)	Tank Type
West Plant 790-CT-10	WRICO Sodium Hypochlorite	Cooling Tower Chemicals	7681-52-9	Sodium Hypochlorite	12.5	N/A	250	Plastic
			7647-14-5	Sodium Chloride	9.0-10.0			
			1310-73-2	Sodium Hydroxide	0.5-2.0			
Jackson Water Well 675-CT-01	SLI-5225 Blended Phosphate	Potable Water Chemicals	7664-38-2	Phosphoric Acid	30-60%	171844	120	Plastic
Jackson Water Well 675-CT-02	Caustic Soda	Base	1310-73-2	Sodium Hydroxide	50	N/A	250	Plastic
Jackson Water Well 675-CT-03	Caustic Soda	Base	1310-73-2	Sodium Hydroxide	50	N/A	250	Plastic
Student Rec Center 825-CT-01	Hydrochloric Acid	Pool Treatment	7647-01-0	Hydrochloric Acid	10.0-30.0	N/A	8-50- gallon drums (400 gallons)	Plastic
S/East Chill Plant 1004-CT-01	TWT-2258	Closed Loop Chemical	1310-73-2	Sodium Hydroxide	2.0-10.0	909647	120	Plastic
			7664-93-9	Sulfuric Acid	1.0-5.0			
S/East Chill Plant 1004-CT-02	TWT-Memcide550	Cooling Tower Chemical/Corrosion Inhibitor	10377-60-3	Magnesium Nitrate	1.40-2.0	910661	165	Plastic
			2682-20-4	2-Methyl-4-isothiazolin-3-one	0.35-0.45			
			26172-55-4	5-chloro-2-methyl-4-isothiazolin-3-one	1.1-1.13			
			7786-30-3	Magnesium Chloride	1.0-1.2			
S/East Chill Plant 1004-CT-03	TWT-2478	Cooling Tower Chemicals	1310-58-3	Potassium Hydroxide	10.0-20.0	N/A	165	Plastic
			37971-36-1	2-phosphonbutane-1,2,4-tricarboxylic acid	5.0-10.0			
			2809-21-4	1-Hydroxyethylidene 1,1-diphsophonic acid	2.0-5.0			

Table E-1								
Bulk Chemical Storage Tank Locations								
Texas State University- San Marcos								
Location	**Product No.**	**Application**	**CAS #**	**Chemical Composition**	**%**	**Tank Serial #**	**Container Size (gallons)**	**Tank Type**
S/ East Chill Plant 1004-CT-04	Sulfuric Acid	Cooling Tower Chemicals	7664-93-9	93% Sulfuric Acid	93	75265	150	Plastic
S/ East Chill Plant 1004-CT-05	Sodium Hypochlorite Wricochlor	Cooling Tower Chemicals	7681-52-9	Sodium Hypochlorite	12.5	N/A	150	Plastic
			7647-14-5	Sodium Chloride	9.0-10.0			
			1310-73-2	Sodium Hydroxide	0.5-2.0			

Figure F-1

Zone: 2

817 Cogeneration Power Chiller
Bulk Chemical Tanks (CT)

817-CT-03
817 CoGen Oxygen Scavenger 110 gallon Plastic tank

	YES	NO	N/A
1. Is there evidence of leakage or spillage around the tanks?	☐	☐	☐
2. Is there evidence of leakage or deterioration on the piping/tubing connections?	☐	☐	☐
3. Is there evidence of settlement, cracking, or pitting of the tanks?	☐	☐	☐
4. Is there liquid in the secondary containment?	☐	☐	☐
5. Is the piping/tubing used to transfer chemicals is double walled?	☐	☐	☐
6. Is access to the chemical tank restricted?	☐	☐	☐
7. Is adequate spill containment available near the tank?	☐	☐	☐

COMMENTS _____

_____

_____

_____

_____

_____

Completed By: _____ Date: _____

Thursday, December 02, 2010 Environmental Health, Safety and Risk Management Page 1 of 1

Figure C-2
Spill Kit Checklist
Texas State University Round Rock Campus

Zone: 0

Spill Kit

Kit located inside building on NE corner

Spill Kit (SPK)

901-SPK-001

Spill Kit

	YES	NO	N/A
1. There is one pair of splash goggles (OSHA) within yellow overpack drum?	☐	☐	☐
2. There are 25 sorbent pads (gray) within yellow overpack drum?	☐	☐	☐
3. There is 1 baking soda box within yellow overpack drum?	☐	☐	☐
4. There are two pair of heavy-duty industrial gloves within yellow overpack drum?	☐	☐	☐
5. There are two heavy duty trashbags for waste within yellow overpack drum?	☐	☐	☐
6. There are two waste labels for identifying the contents of the waste within yellow overpack drum?	☐	☐	☐
7. There are two mini booms (sorbent) within yellow overpack drum?	☐	☐	☐

Comments: _____

_____

_____

_____

Completed By: _____ Date: _____

PCL XL error

Warning: IllegalMediaSize