



SPCC

- **Created by EPA in 1973 under the Clean Water Act.**

Purpose: To protect the "navigable" waters of the United States, a business or organization must develop a plan that would prevent any pollution from contacting water resources.

Pollution generated from properties can reach navigable waters through: runoff into floor drains, catch basins, drainage swales and reach storm sewers, drainage ditches, storm water ponds, or channels that would ultimately transcend into a river, lake, pond, bayou or ocean.

Spill Prevention Control & Countermeasure Plan

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SPCC

What substances fall under the SPCC rules?

Petroleum product – In Texas, a petroleum product is defined as a petroleum substance obtained from distilling and processing crude oil that is liquid at standard conditions of temperature and pressure, and that is capable of being used as a fuel for the propulsion of a motor vehicle or aircraft, including but not necessarily limited to motor gasoline, gasohol, other alcohol blended fuels, aviation gasoline, kerosene, distillate fuel oil, and #1 and #2 diesel.

The term does not include naphtha-type jet fuel, kerosene-type jet fuel, or a petroleum product destined for use in chemical manufacturing or feedstock of that manufacturing. 30TAC:327.2



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Substances that fall under SPCC rules

If the substance is derived from a petroleum source or can be extracted by an organic solvent, it is regulated under SPCC rules. The types of oils include mineral (petroleum), vegetable, animal, essential, and edible.

Examples

- Kerosene
- Diesel Fuel
- Gasoline
- Motor Oils & Lubricating Oils
- Tars
- Asphalts
- Crude Oils
- Naphtha
- Mineral Spirits
- Transformer Oil
- Heating Oils
- Cutting Oils
- Paraffin Wax
- Animal & Vegetable Fats/Oil
- Whale Oil
- Coconut Oil
- Corn Oil
- Tallow
- Meat Rendering
- Fish Oil
- Tung Oil
- Linseed Oil
- Cottonseed Oil



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Substances that fall under SPCC rules


Oils stored at UHCL include: vehicle fuels, various hydraulic, lube, motor, and used oils utilized in campus equipment, elevators, and vehicles; as well as used cooking grease from the on-campus cafeteria. In addition, some campus transformers contain 55 or more gallons of oil.

Oils stored at the campus in containers having a capacity equal to or exceeding 55-gallons include:

- Oil Storage Containers:**
 - 55-Gallon Drums
 - Diesel Emergency Generator Tanks
 - Used Oil Tank
 - A split tank for vehicle refueling containing both diesel and gasoline.
- Oil-Filled Equipment:**
 - Elevator Hydraulic Oil Tanks
 - Electrical Transformers
 - Oil-Water Separators



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SPCC: Three Point Sections

Prevention
How can we prevent a spill from occurring?

Control
How do we control a spill if it occurs?

Countermeasures
How do we clean-up and report spills?



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SPCC: Prevention



Training
Awareness of Work Environment
Inspections
Safety Devices
Regular Maintenance
Best Work Practices
Corrosion Protection
Spill Prevention Procedures & Methods





Prevention : Training

Our SPCC Plan says:

Personnel are instructed in the operation and maintenance of equipment to prevent discharges of oil, discharge procedure protocols; applicable pollution control laws, rules, and regulations; general campus operations; and, the contents of the campus SPCC Plan (including the use of the QRG). Training for oil-handling personnel will be performed annually.

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





Prevention : Training Continued.....

Our SPCC Plan Says...

UHCL will schedule and conduct discharge prevention briefings for oil-handling personnel at least once per year to assure that they have an adequate understanding of the campus SPCC Plan, its requirements, and their responsibilities. These briefings will highlight **known discharges or failures, malfunctioning components, and any recently developed precautionary measures.**



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



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SPCC: Prevention



Best Work Practices

Are you using the Best Available Control Technology (BACT) or the cheapest technology?

Are you doing your work the best way or the quick and easy way?





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SPCC: Prevention

Regular Maintenance

Are there regular scheduled maintenance checks and part replacements?

Corrosion protection

Are you preventing corrosion from occurring?
Reporting if you find corrosion of oil containing equipment?
Does it have corrosion protection?

Safety Devices

Is there an emergency cut-off switch?
Lock-out Tag-out?



SPCC: Prevention

Awareness of Work Environment

Do you know what is going on around you?
Does anything look out of place?
Any new or old hazards?

Spill Prevention Procedures & Methods

Q: What procedures and work routines are already in place in your department to prevent spills and control hazards?

A: Oil Loading and Unloading Procedures

- Bulk Delivery Procedures (In SPCC)
- Bulk Oil Collection/Pick-up (In SPCC)

B. Preventative Maintenance Program (FMC)



SPCC: Inspections

What do we need to Inspect?

- Transformers (Electricians only!)
- Above Ground Storage Tanks (Pump Station, Used Oil)
- Emergency Generators
- Drums (Shop, Central Plant, HW Storage, etc.)
- Hydraulic reservoir (Elevators)
- **Oil Water Separator** (not on form, but for CLWA)
- Kitchen Grease Disposal collection areas.

Inspect areas for leaks, integrity, housekeeping, maintenance malfunctions, etc.

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Prevention: Inspections

How often do we inspect these areas?

A: At Least Quarterly

Q: Where is the form located?

A: Facilities Management should delegate the inspector(s) and provide the inspection sheets within the SPCC plan.



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Prevention: Inspections

Quarterly Inspection checklist:

APPENDIX C
CAMPUS QUARTERLY INSPECTION CHECKLIST

Inspection Item	Frequency	Bayou Building															
		1	2	3	4	5	6	7	8	9	10	11	12				
1. Visual inspection of all tanks for leaks, integrity, and housekeeping.	Quarterly																
2. Visual inspection of all piping for leaks, integrity, and housekeeping.	Quarterly																
3. Visual inspection of all loading/unloading/transfer equipment for leaks, integrity, and housekeeping.	Quarterly																
4. Visual inspection of all dispensing equipment for leaks, integrity, and housekeeping.	Quarterly																
5. Visual inspection of all portable containers for leaks, integrity, and housekeeping.	Quarterly																
6. Visual inspection of all oil-filled equipment for leaks, integrity, and housekeeping.	Quarterly																
7. Visual inspection of all emergency response equipment for leaks, integrity, and housekeeping.	Quarterly																
8. Visual inspection of all security equipment for leaks, integrity, and housekeeping.	Quarterly																



Prevention: Inspections Continued...

Quarterly Inspection check list includes these sections:

- Tanks
- Piping
- Loading/Unloading/ Transfer Equipment
- Dispensing Equipment
- Portable Containers
- Oil-Filled Equipment
- Emergency Response Equipment
- Security

Inspect areas for leaks, integrity, housekeeping, maintenance malfunctions, etc.

Listed by Locations:

Bayou Building
Arbor Building
Delta Building
Student Service Building
FMC Building
NOA 1 Building

See Inspection Handout



Prevention: Inspections Continued...

SPCC Plan Tables:
Table 1: Oil Storage Tank and Container Inventory
Table 2: Oil-Filled Mechanical Equipment Inventory
Table 3: Oil-Filled Electrical Equipment Inventory

[See SPCC Plan for Tables and Maps](#)

Tank / Container	Oil Storage Capacity (GAL)	Material Stored	Location	Inspection Frequency	Inspection Requirements	Next Inspection Due
Bayou Building	400	Used Oil	Bayou Building	Quarterly	See Table 1 for details	10/22/2014
Student Services	400	Used Oil	Student Services	Quarterly	See Table 1 for details	10/22/2014
Delta	400	Used Oil	Delta	Quarterly	See Table 1 for details	10/22/2014





Emergency Response Equipment is located in each building where a risk of spill exists.



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Prevention: Inspection Locations

Oil-Filled Mechanical Equipment

Elevator Hydraulic tanks larger than 55 gallons

Require quarterly inspections, including a third party contractor for maintenance issues, as well as a yearly state inspection to operate.

Locations:

- Bayou Building
- Student Services
- Delta

Table 2 in SPCC Plan Appendices has locations and quantities of elevator hydraulic oil.



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Prevention: Inspection Locations

Oil-Filled Electrical Equipment

Transformers


There are 10 pad-mounted transformers that contain 55 gallons or more of oil. Third party annual inspections, 5 year infrared and oil integrity testing, routine, plus quarterly SPCC inspections.

Locations:

- Bayou Building (140-245 gallons)
- Delta (308 gallons)
- Arbor (240 gallons)
- NOA (174 gallons)

Table 3 in SPCC Plan Appendices has locations and quantities of transformers.





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Prevention: Inspection Locations

Oil Storage Tank & Container Inventory

Table 1 in SPCC Plan Appendices has listed Quantities & Locations.

Generators

- Diesel (250) FMC
- Diesel (850) SSCB

The emergency generators are tested **monthly** by FMC personnel. In addition, third party contractors conduct quarterly inspections of the generators.

Follow Bulk oil delivery, Collections/Pick-up procedures.



Prevention: Inspection Locations

Oil Storage Tank & Container Inventory

See Table 1 and Inspection List

Above Ground Storage Tanks (AST)

Used oil Tank

- AST 400 gallon Used Oil

Split Tank

- AST: 1000 Diesel
- AST: 4,000 Gasoline.

UHCL will inspect its bulk oil tanks in accordance with the industry standards outlined in the Steel Tank Institute's (STI) Standard for "Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids" - SP001

Routine visual inspections of all oil containers, **piping, joints, unions, valve and pump seals and bodies, pipe supports and metal surfaces.**



Prevention: Inspection Locations

Oil Storage Tank & Container Inventory


Table 1 in SPCC has listed Quantities & Locations.

Drums (various quantities)

- FMC,
- Bayou,
- Hazardous Waste Storage

- DOT Approved Container
- Drums must be replaced every **7yrs for Poly & 12yrs for Steel.**
- Closed at all times
- Secondary containment is required for all 55 gallon containers.
- If exposed to the outside, they must be able to hold the drum contents and the rain!



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SPCC: Control Methods

Engineering Controls


- Secondary Containment: Dikes, berms, retaining walls, spill pallets
- Rain Covers
- Curbs
- Drainage systems
- Ponds
- Alarms
- Double walls
- Absorbent materials
- Drain Covers
- Pump Start controls (for refueling)



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SPCC: Control Methods

- Keep containment areas clean and well-maintained.
- Report damages of any engineered control devices or collection areas.
- Report water or other substances located in containment areas, clean and dispose of material.
- Keep drain valves locked in the closed position.
- Utilize log books and inspections forms.
- Inspect for oil prior to pumping water out.



Inspection: Summary

If the inspection reveals an issue with the integrity of the tank, container, or containment that could result in: a release of oil, including, but not limited to leaking seams, gaskets, flanges, piping, pumps, valves, rivets, and bolts, the inspector will take immediate action to correct the deficiency, and record on the **Corrective Action Form** found in the SPCC Plan.



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SPCC: Countermeasures

In House clean-up

- Facilities Personnel
- EH&S Staff



Contractor Clean-up

- SWS Environmental Services
- Garner Environmental Services
- Allied International Emergency



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SPCC: Countermeasures

Local Clean-up

Small Spills: Facilities personnel


Employees handling oil/gasoline (As defined by EPA) should clean-up small *incidental* spills.

Examples

- Filling gas can and pouring over
- Slow transformer leak
- Emergency Generator Leak
- Car leak in Shop
- Leakage from lawn equipment (lawn mower, hedger, chainsaw, etc.)
- Kitchen grease spill








SPCC: Countermeasures


Picture examples of small leaks/spills for employee clean-up.

Emergency Generator Leak



- Fill out inspection Sheet.
- Cleanup area using oil absorbent material.
- Report to management.
- Fill out corrective action report.






SPCC: Countermeasures

Picture Examples of small leaks/spills for employee clean-up.

Transformer Leak



- Electrician fills out inspection sheet.
- Cleanup area using oil absorbent material.
- Report to management.
- Fill out corrective action report.





SPCC: Countermeasures

Local clean-up

EH&S Staff in Risk Management

Cleans up spills that **reach beyond incidental**, that could potentially become reportable levels or hazardous.

Test atmosphere for the LEL (Lower and Upper Explosive Limits) and Toxicity Levels.

Transformer oils

Contact EH&S for assistance and to contact authorities as needed. **24 gallons** of fuel or used oil is reportable on land.

If **any** oil is found in the waterway it is reportable.

Gasoline and Diesel!

If gasoline or diesel is spilled inside beyond incidental, please contact us to measure vapors for health concerns.

If spilled outside, contact us for assistance if greater than 2 gallons (24 gallons is reportable) and we will assist.







SPCC: Countermeasures

Most people can begin to smell gasoline at 0.25 parts of gasoline per million parts of air (ppm).

The Occupational Safety and Health Administration (OSHA) regulates levels of gasoline and diesel in the workplace. The maximum amount of gasoline allowed in workroom air during an 8-hour workday of a 40-hour workweek is 900 milligrams of gasoline vapor per cubic meter of air (mg/m³), or 300 ppm Gasoline and Diesel TLV is 15 ppm.




Certain workers have a greater risk of exposure to gasoline type vapors. These include service station attendants, drivers of gasoline tank trucks, workers at bulk loading terminals and marine loading docks, workers who remove and service underground storage tanks and gasoline pipelines, workers who find and clean up gasoline spills and leaks, and refinery workers. If you have any of these jobs, you are probably exposed to small amounts of gasoline vapors every day you work. If you work at a job using gasoline-powered equipment or vehicles, you may be exposed to gasoline and its vapors.



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SPCC: Countermeasures

Local clean-up

EH&S Staff in Risk Management

Examples:

- Gasoline station is being refilled by a tanker truck. The truck over flows.
- Transformer leaked 150 gallons overnight.
- Used Oil Drum spills on the ground. The amount is less than reportable, but has strong fumes.
- Gasoline Drum spills outside.
- Emergency generator leaks 10 gallons of diesel on the ground.
- Contacting spill response team, local authorities, reporting to EPA and TCEQ.





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SPCC: Countermeasures


Large Spills for Emergency Clean-up:

Re-Fueling Leak



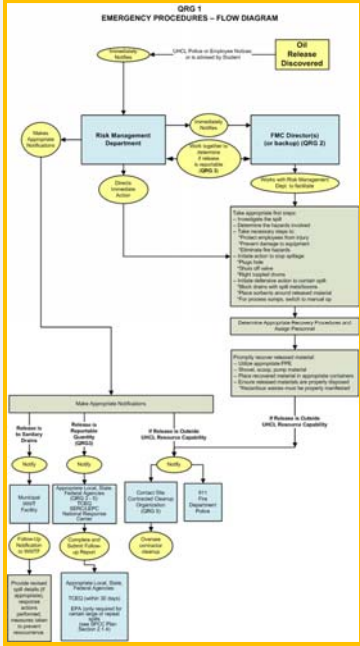
- Ensure Bulk delivery procedures are being followed by contractors.
- Stop flow if safe to do so.
- Inform your Manager, Risk Management and Police.
- Block flow from reaching drains and waterways, if safe to do so.
- EH&S and/or Emergency Personnel can clean-up.







SPCC: Emergency Procedures

Please see hand-out at this time







SPCC: QRG

Quick Reference Guide: QRG


Available at all Spill Supply locations and where large volumes of oil are stored.


- If **safe and easy** to do so, stop the leak.
- Inform Risk Management, FMC and Police.
- Risk Management with FMC will determine the size of spill and if contractors need to be called for clean-up.
- Risk Management will contact State and Federal agencies.

The QRG contains:

- Emergency Diagram
- Spill Notifications
- Contact Information

Know your role in the Emergency Response Plan






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SPCC: Countermeasures

- Spill response material are located in each building containing oil equipment.
- PPE is located within the drum - Intended to control spread of spills or can be used to clean-up small spills.
- Small spills can be handled with small kits within your area.
- Picture and examples of drum, clean up materials (kitty litter, pads, absorbent booms, etc.).
- Contact EH&S for disposal.**
- Questions about any spills**
- Reporting**





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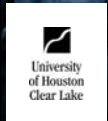
What Departments Implement the Emergency Plan?

FMC

Police

Coordinate

Risk Management



SPCC



Any Questions?