

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

UNIVERSITY OF MARYLAND

Department of Environmental Safety
3115 Chesapeake Building 338
College Park, Maryland 20742
Phone: (301) 405-3960

CONTACT:

Leon Igras, Director

CERTIFICATION: I hereby certify that I have examined the facility, and, being familiar with the provisions of 40 CFR Part 112, attest that this SPCC Plan has been prepared in accordance with good engineering practices. This certification is contingent upon the successful implementation of the measures outlined in Table 1 within the time frames specified in Appendix B.

ENGINEER: Lori P. Miller, PE

SIGNATURE: _____

REGISTRATION NUMBER: 20224

STATE: Maryland

DATE: December 20, 1999

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Spill Prevention, Control, and Countermeasure (SPCC) plan is to meet the requirements of U.S. Environmental Protection Agency (USEPA) regulations contained in Title 40, Code of Federal Regulations, Part 112 (40 CFR 112) (see Appendix A for a copy of the regulations). A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the navigable waters of the United States. The University of Maryland meets these criteria. However, the University is not required to prepare a Facility Response Plan (see Appendix B - Determination of Substantial Harm).

1.2 Maintenance of the Plan

Although the regulations do not require the SPCC Plan to be filed with USEPA, a copy will be available for on-site review during normal working hours in the Environmental Service Facility, Building 344. The SPCC plan will be submitted to USEPA Region III and the Maryland Department of the Environment (MDE) along with the other information specified in §112.4 if either of the following occurs:

1. The University discharges more than 1,000 gallons of oil into or upon navigable waters of the United States or adjoining shorelines in a single event; or
2. The University discharges oil in harmful quantities in two spill events within any twelve month period. A harmful quantity is defined by 40 CFR 110 as a quantity that:
 - a. Violates applicable water quality standards, or
 - b. Causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

Spill information will be reported to USEPA and MDE within 60 days if either of the above thresholds are reached. The report will contain the following information:

1. Name of the facility;
2. Name(s) of the owner or operator of the facility;
3. Location of the facility;
4. Cause of the spill(s);
5. Corrective actions and/or countermeasures taken including adequate description of

- equipment repairs and/or replacements;
6. Information the regional administrator may reasonably require pertinent to the plan or spill event;
 7. Date and year of initial facility operation;
 8. Maximum storage or handling;
 9. Description of the facility, including maps, flow diagrams, and topographical maps;
 10. Failure analysis of the system and sub-system in which the failure occurred;
 11. A complete copy of the SPCC plan with any amendments; and
 12. Additional measures taken (preventative) or contemplated to minimize the possibility of recurrence.

The SPCC plan will be amended within six months whenever there is a change in facility design, construction, operation, or maintenance that materially affects the facility's spill potential. The plan will be reviewed once every three years and amended to include more effective prevention and control technology, if such technology will significantly reduce the likelihood of a spill event and has been proven in the field. All changes will be certified by a registered professional engineer.

3.0 MANAGEMENT APPROVAL - 40 CFR 112.7

This SPCC Plan is fully approved by the Administration of the University of Maryland and will be implemented as described herein.

Dr.
Charles Sturtz,
VP of Administrative Affairs

Date

4.0 PAST SPILL HISTORY - 40 CFR 112.7(a)

DATE	DESCRIPTION OF SPILL	CORRECTIVE ACTIONS TAKEN	PLAN FOR PREVENTING RECURRENCE
8/6/99	No known harmful quantities of oil have been discharged to navigable waterways.		

5.0 FACILITY INFORMATION

- Facility Name:** University of Maryland
- Address:** 3115 Chesapeake Building 338
College Park, Maryland 20742-3133
- Owner:** State of Maryland
- Contact:** Leon Igras, Director
(301) 405-3099
- Other Personnel:** Lori Miller, Sr. Environmental Project Coordinator
(301) 405-5408
- Location:** The University of Maryland is located in Prince George's County, Maryland adjoining the Paint Branch, a tributary to the Anacostia River. The University is bordered on the west and north by University Boulevard, on the east by Baltimore Avenue and Paint Branch Parkway, and on the south by Campus Drive, Mowatt Lane, Knox Road, and Norwich Avenue. The University is at 38.98 North latitude and 76.94 West longitude.
- Description:** The University of Maryland is an educational and research institution which uses diesel fuel for emergency generators and vehicles, gasoline for vehicles, and fuel oil for heating and emergency generators. Map 1 shows the campus boundaries and surface features, including the locations of the oil tanks. Table 1 lists each tank by identification number and location.
- Fixed Storage:**
- (1) 250,000 gallon vertical AST (#6 fuel oil)
 - (1) 20,000 gallon UST (gasoline)
 - (1) 12,000 gallon UST (diesel)
 - (2) 10,000 gallon USTs (fuel oil)
 - (1) 8,000 gallon horizontal AST (diesel)
 - (1) 6,000 gallon UST (diesel)
 - (2) 2,000 gallon USTs (fuel oil)
 - (3) 1,000 gallon Lube Cubes (2 diesel, 1 gasoline)
 - (1) 1,000 gallon horizontal AST (gasoline)
 - (1) 600 gallon UST (diesel)
 - (2) ~ 500 gallon Lube Cubes (diesel)
 - (5) ~ 500 gallon horizontal ASTs (4 diesel, 1 waste oil)
 - (1) ~ 500 gallon AST integral to generator (diesel)

- (1) 400 gallon UST (fuel oil)
- (18) 275 gallon horizontal ASTs (2 waste oil, 6 diesel, 10 fuel oil)
- (3) ~ 250 gallon Lube Cubes (diesel)
- (1) 250 gallon AST integral to generator (diesel)
- (1) 180 gallon Lube Cube (diesel)
- (1) 60 gallon AST integral to generator (diesel)
- (4) 30 gallon ASTs integral to generator (diesel)
- (1) 30 gallon AST (diesel)

- Portable Storage:**
- (1) 250 gallon AST integral to generator (diesel)
 - (1) 50 gallon AST integral to generator (diesel)
 - (1) 30 gallon AST integral to generator (diesel)

Total Oil Storage: 335,951 gallons

In-Plant Treatment: None.

Vehicles: Approximately 1200 cars, buses, trucks and maintenance vehicles

Other: The University operates under Oil Operations Permit No. 99-OPT-3522, which is maintained by the Department of Environmental Safety in the Environmental Services Facility, Building 344.

6.0 POTENTIAL SPILL VOLUMES AND RATES - 40 CFR 112.7(b)

The University of Maryland has identified 55 tanks on the College Park campus which are being addressed under this SPCC plan. The tanks vary from 30-gallon hand-filled tanks which fuel small generators to a 250,000-gallon bulk fuel oil tank which provides back-up fuel for the campus' central steam plant. The applications include residential-type heating, generator fueling, vehicle fueling, and steam plant back-up fuel. The locations range from small tanks in remote wooded locations to bulk tanks in highly developed cosmopolitan settings. The campus itself covers over 1200 acres on the main campus alone. Because of the diversity of the sites where the tanks are located, it is impossible to evaluate the overall potential spill volumes and rates. Therefore, each tank was evaluated individually and assigned a ranking based on risk. (See Maps for tank locations and drainage paths).

The risk rankings were determined based on the condition of each tank, the adequacy of secondary containment, and the potential for drainage to an unprotected drain or waterway. The table below outlines the specific criteria used to assign each rank. The tank was considered low risk if it met all low-risk criteria, and high risk if it met any one or more of the high-risk criteria.

Risk Ranking	Tank Condition	Secondary Containment	Drains to Unprotected Drain or Waterway
Low	good	Yes	No
High	poor	No	Yes

After evaluating each tank, it was determined that every tank could have a low risk ranking if some corrective actions are taken. The corrective actions required to make every tank low risk are shown in Table 1 - Measures to Minimize Risk.

As stated on the cover of this document, the engineering certification of this SPCC plan is contingent upon successfully implementing the measures outlined in Table 1. The measures must be implemented in accordance with the schedule presented as Appendix C, or the certification of this SPCC plan will become void.

7.0 CONTAINMENT AND DIVERSIONARY STRUCTURES - 40 CFR 112.7(c)(1)

Upon implementation of the measures to minimize risk specified in Table 1, the facility will be protected as outlined below (see Table 2 - Tank Containment and Drainage Summary for details).

- All tanks have integral secondary containment, except Tanks 1B, 02, 39, 43, 50, 55, 57, and 58.
- Tanks 1B and 02 are within a large diked enclosure.
- Tanks 39, 43, 50, 55, 57, and 58 are fuel oil underground storage tanks which are not currently required to have secondary containment. However, all these tanks have leak detection systems in place.
- All storm drains near AST's are protected with oil and grease catch basin inserts.
- All floor drains near AST's are protected with plugs.

8.0 DEMONSTRATION OF PRACTICABILITY - 40 CFR 112.7(d)

The University of Maryland Department of Environmental Safety has determined that use of the containment and diversionary structures or readily available equipment to prevent discharged oil from reaching navigable waters is practical and effective at this facility.

9.0 FACILITY DRAINAGE - 40 CFR 112.7(e)(1)

- See the Storm Drainage System Map for tank locations and flow directions.
- Drainage from the 250,000 gallon bulk storage tank diked storage area is restrained by valves kept in the closed position to prevent a spill or other excessive leakage of oil into the campus's drainage system.
- Gate valves are used to drain the diked area.
- In the event of a spill from a tank, the oil will be contained with secondary containment or a dike, unless it is a heating oil underground storage tank, all of which are protected with leak detection systems. If a spill occurs during transfer or in a manner that cannot be contained in a dike or secondary containment, nearby drains are protected with oil-filtration inserts or plugs.
- Facility drainage systems are adequately engineered to prevent oil from reaching navigable water in the event of equipment failure or human error.

10.0 BULK STORAGE TANKS - 40 CFR 112.7(e)(2)

- The 250,000 gallon bulk storage tank is compatible with the oil contained and conditions of storage.
- The 250,000 gallon bulk storage tank has secondary containment large enough to contain the volume of the tank plus 8 inches of precipitation.
- Drainage of rainwater from the 250,000 gallon bulk storage tank diked area is accomplished in the following manner.
 - S The discharge valve is kept in the closed position at all times unless the dike is deliberately being drained.
 - S Run-off rainwater is inspected to ensure there is no sheen. If there is a sheen, the oily material is removed with sorbent booms.
 - S The discharge valve is opened and resealed under supervision.
 - S A log is kept (see Appendix D) indicating the date and time of discharge, the condition of the water released, and the name of the person responsible for the release.
- Underground storage tanks are pressure tested every five years to ensure integrity and leak detection systems are checked quarterly.
- There are no partially buried tanks at the University, and none will be installed in the future.
- The 250,000 gallon above ground bulk storage tank is tested in accordance with American Petroleum Institute (API) Standard 653 every ten years. Comparison records are kept, and tank supports and foundations are included in these inspections.
- All above ground storage tanks are inspected on a monthly basis (see Appendix E, Facility Inspection Check List).
- There is an internal heating coil in the 250,000 gallon bulk storage tank. The heating coil steam return line is recycled back to the Steam Plant.
- Each tank is equipped with a direct-reading level gauge and/or a vent whistle to prevent tank overfilling. Venting capacity is suitable for the fill and withdrawal rates.
- All outfalls from campus are monitored monthly to ensure there are no oily discharges to surface waters.

- Oil leaks which result in a loss of oil from tank seams, gaskets, rivets, and bolts are promptly corrected and any materials contaminated from such leaks are promptly removed.
- Portable oil storage and 55-gallon drums are located to prevent spilled oil from reaching navigable water, provided with secondary containment, and located where they will not be subject to periodic flooding. In addition, all mobile storage units are equipped with spill kits.

11.0 TRANSFER OPERATIONS, PUMPING, AND IN-PLANT PROCESSES - 40 CFR 112.7(e)(3)

- Buried piping associated with the 250,000 gallon bulk storage tank is cathodically protected to prevent corrosion. If a section of the line is exposed, it is examined for deterioration. If corrosion damage is found, additional examination and corrective action will be taken as warranted based on the magnitude of the damage.
- The only other buried oil conveyance piping on campus is associated with underground storage tanks, which are protected by leak detection systems.
- Pipelines not in service or in standby for an extended period are capped or blank flanged and marked as to their origin.
- All pipe supports are properly designed to minimize abrasion and corrosion and to allow for expansion and contraction.
- All aboveground pipelines and valves are examined monthly to assess their condition. Pressure testing for piping is conducted as warranted.
- Warning signs are posted as needed to prevent vehicles from damaging aboveground pipelines.

**12.0 TANK CAR AND TANK TRUCK LOADING/UNLOADING RACK -
40 CFR 112.7(e)(4)**

All oil is delivered to the point of storage by tank truck. The tank trucks are operated by independent vendors, so the vendors are responsible for ensuring their operations are performed in accordance with applicable local, state and Federal regulations. The oil vendors are responsible for cleaning up any spills caused by their delivery operations. The University does, however, protect all drains near areas where deliveries are made.

13.0 INSPECTION AND RECORDS - 40 CFR 112.7(e)(8)

- The 250,000 gallon bulk storage tank is inspected by Steam Plant personnel weekly. The inspection consists of a complete walk through of the tank area to check for tank damage or leakage, stained or discolored ground, excessive accumulation of water in diked areas, and to ensure the dike drain valves are securely closed. Inspection records are maintained at the Steam Plant.
- Monthly inspections of all tanks are performed by Environmental Safety personnel using the check list in Appendix E. These inspections are signed by the inspector and maintained in the Environmental Services Facility, Building 344, for three years.
- All records relevant to this SPCC plan (including training records and dike drainage records) are maintained in the Environmental Services Facility, Building 344.

14.0 SECURITY - 40 CFR 112.7(e)(9)

- The 250,000 gallon bulk storage tank area is surrounded by steel security fencing and the entrance gates are locked when the facility is unattended.
- The master flow and drain valves are locked in the closed position when in non-operating or non-standby status.
- The loading and unloading connections of oil pipelines are capped when not in service or when in standby service for an extended time.
- The University of Maryland Campus Police perform regular patrols on campus.

15.0 PERSONNEL, TRAINING, AND SPILL PREVENTION PROCEDURES - 40 CFR 112.7(e)(10)

- Facility personnel have been instructed by management in the operation and maintenance of oil pollution prevention equipment and pollution control laws and regulations.
- Leon Igras, Director of Environmental Safety, is accountable for oil spill prevention at the University of Maryland.
- Annual spill prevention briefings are provided by the Department of Environmental Safety for operating personnel to ensure adequate understanding of the SPCC plan. These briefings highlight any past spill events or failures and recently developed precautionary measures. Training is held on oil spill prevention, containment, and retrieval methods. Records of these briefings and spill prevention training are kept on the form provided as Appendix F. Instructions and phone numbers regarding the reporting of a spill to the National Response Center and the state are listed in Section 16.0 and are posted in the Environmental Services Facility office.
- Figure 1 contains a flow chart of emergency procedures to be followed by on-call Environmental Affairs personnel in the event of an oil spill.
- Signs are posted at all tanks showing who to call in case of an oil release.

16.0 EMERGENCY TELEPHONE NUMBERS

- Notification Numbers
 - S Scott Lupin, Assistant Director 1 (301) 405-3968 (w)
1 (301) 309-0754 (h)
 - S National Response Center 1 (800) 424-8802
 - S Maryland Department of the Environment 1 (410) 974-3551
- Clean-Up Contractors
 - S CleanHarbors 1 (410) 685-3910
 - S Safety Kleen 1 (301) 939-6000
- Supplies and Equipment
 - S D&L Growers (vermiculite) 1 (717) 656-0809
 - S Warring & Sons (drum supplies) 1 (301) 322-5400
 - S Lab Safety Supply (sor bent booms) 1 (800) 356-0783

FIGURE

MAPS

TABLES

APPENDIX A - 40 CFR 112

**APPENDIX B - Determination of
Substantial Harm**

APPENDIX C - Schedule

APPENDIX D - Dike Drainage Log

APPENDIX E - Facility Inspection Check List

APPENDIX F - Training Log