

MEDICAL UNIVERSITY OF SOUTH CAROLINA (MUSC)
SPILL PREVENTION CONTROL AND COUNTER MEASURES PLAN (SPCC)

Revised: 9/2007

**Medical University South Carolina
Storm Water Pollution Prevention Program**

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I. Introduction

A. General

This program represents the combined requirements for an Oil Spill Prevention Control and Countermeasure Plan (SPCC) and a Storm Water Pollution Prevention Plan in an integrated and coordinated pollution plan (SWPPP) This SWPPP for the Medical University of South Carolina is developed in accordance with the United States Environmental Protection Agency (EPA) regulation on oil pollution and South Carolina Department of Environmental Control (SCDHEC) publication “Contingency Plan for Spills of Oil and Other Hazardous Substances”. The SWPPP Plan is scheduled to be phased out during 2003 due to regulatory changes. This SPCC Plan will still be in effect.

A copy of this Plan will be located at the MUSC Office of Occupational and Safety and Health, the Office of the SPCC Coordinator.

The SWPPP shall be updated and/or revised whenever there is a change in design, construction, operation or maintenance which has a significant effect on the potential for the discharge of pollutants.

All employees shall be made aware of the potential environmental consequences resulting from oil spills and pollutants in storm water and be cognizant of individual responsibilities for the prevention and control of oil spills and other pollutant discharges. As a minimum, all new employees shall be briefed on their responsibilities and given updates as significant changes are made.

B. Facility Description

MUSC is a State supported, co-educational, professional institution, which covers several city blocks on the West Side of the Charleston peninsula. The three basic functions of MUSC are education, service and research in the field of medical science. The facility consists of approximately 100 structures. The majority of the structures are academic facilities, parking areas, or other activities not associated with the facility's industrial activity of medical research and hospital operations.

C. Spill Reporting

Spill reporting and containment should be conducted in an timely manner. Personnel observing a spill should stop the release of product and contain. The spill if possible and immediately call the Spill Coordinator or designated person at Occupational Safety and Health Programs at (843) 792-3604 or MUSC "Trouble Call" (ext. 4119) if the spill occurs during night or weekend hours. If personnel observing a spill are not been trained on the equipment releasing product or spill response procedures, they should not attempt to respond to the release and should immediately call the Spill Coordinator or designated person on "Trouble Call." Under no circumstances should personnel endanger themselves or others during any phase of a spill containment or clean-up operation.

II. Potential Hazardous Substances

A summary of the potential hazardous substances used, stored, or produced at MUSC are discussed below:

A. Fuel Oil

Fuel oil is stored at various locations on the MUSC complex and is as back-up fuel for boilers and emergency generators. The fuel oil is stored in both aboveground and underground tanks. All the aboveground tanks are fitted with secondary

containment. There are over 28 tanks totaling a volume capacity of over 160,000 gallons of fuel oil here on campus, which includes Rutledge Tower, ~~and~~ Charleston Memorial Hospital and the Ashley Rutledge Tower (ART) building. Each tank location is inspected to insure compliance.

B. Paint and Solvents

Paint and solvents are stored at the Paint Shop Building (Building 241). Normally there is an average of 500 one-gallon containers of latex and oil-based paint stored in the building. The paints are used at various locations throughout the MUSC campus. All waste paint solvent is housed in 5-gallon hazardous waste containers and transported to MUSC's-permitted Hazardous Waste Treatment, Storage and Disposal Facility (TSDF). Unused solvent (Varsol) is stored in original containers. The Paint Shop Building is a concrete block structure with a raised floor. Storage area for waste material has secondary containment.

C. Hazardous Waste

Hazardous waste is stored in-the Hazardous Waste Building, which is located north of the Basic Science and Dental School (Building 500). Building. The Hazardous Waste Storage Building operates under a Hazardous Waste Permit (SCD 069-316271) issued September 9, 1998. The facility may store hazardous materials as specified in the permit by waste stream code. Waste chemicals are packed in lab packs when they are brought from the labs. Any bulk liquids brought to the facility are transferred from 5-gallon safety cans into the 55-gallon bulk drums at the time they are brought into the building. The building is designed for storage of hazardous wastes and is provided with segregated areas and secondary containment. The building unloading dock has a curbed area for collection of any spills.

D. Liquid Oxygen

Liquid oxygen is stored in two aboveground tanks located adjacent to the Rutledge Tower Complex. The tanks contain a maximum of 75,700 pounds and 23,405 pounds of liquid oxygen.

E. Radioactive Material

Radioactive materials are stored in the Nuclear Pharmacy or the Nuclear Medicine Laboratory Storage areas approved by the MUSC Radiation Safety Office. Radioactive waste will be stored in one of two locations. Storage area #1 is covered is a covered storage area located east of the Hazardous Waste Building. The west and south sides are secured with chain link fabric. The storage area can contain approximately 22 55-gallon drums of dry solid waste.

F. Flammable Material

Flammable materials are stored in one of three locations on MUSC's on campus. The first location is a Flammable Storage Building located north of Building 500. The building contains two separate rooms for storage of materials. The building is a concrete block structure with a bermed floor area that meets the NFPA requirements of Section 30. The second location is also a Flammable Storage Building located directly behind Building 108. This is a single room building with construction design to meet requirement NFPA 30. The third potential storage location for flammable materials is campus-wide laboratory storage cabinets.

G. Other Substances

Due to the research and teaching aspects of MUSC, other chemicals are used and stored in various locations throughout the campus complex. These other substances are stored indoors and are not exposed to storm water. A summary of the various categories of other substances used or stored is as follows

- Numerous chemicals and drugs are used and stored in laboratories. Storerooms are used to store large quantities of the laboratory chemicals. MUSC maintains a master inventory of hazardous chemicals used over 800 laboratories. The list is fairly extensive and is included herein by reference. A copy is available from the MUSC Office of Occupational Safety and Health.
- Infectious wastes are generated at MUSC and consist of the following materials: sharps, discarded medical or laboratory articles; microbiological, blood and blood products; pathological waste; and contaminated animal waste. The infectious wastes are handled in accordance with MUSC infectious waste protocol and stored in the refrigerated Infectious Waste Trailers (Bldg. 770 and Bldg. 500). The waste containers are loaded at covered loading docks onto vehicles for offsite disposal. Regulated medical waste generated at the Main Hospital, Children's Hospital, Rutledge Tower, Clinical Science Building and off-site locations is treated at MUSC's Autoclave Plant.
- Ethylene oxide is used for the sterilization of plastic and rubber items and other materials which would be damaged by steam sterilization. Regulated areas are provided for the storage and use of ethylene oxide.

III. Spill Countermeasures Plan

Upon discovery of any type of spill MUSC has in place a reporting system to start the Emergency Response Plan. The SWPPP coordinator or his appointed representative will direct appropriate clean-up and disposal operation. That person also has available to them a resource system of supplies and personnel to help with the clean-up operation. Supplies are stored throughout the campus and are inventoried often to insure readiness.

Emergency action personnel are trained and annually retrained on clean-up procedures. Currently the most likely scenarios for a problem occurring and material making contact

with bodies of water is damage to one of the aboveground storage tanks. The second most likely event to occur is from a problem at our loading docks during a transfer of material.

Spills such as this will require immediate response to prevent any material from reaching a storm water inlet. Every effort will be made to prevent a spill from reaching the storm water system. However, if any material reaches a surface body of water off-site, the appropriate authorities will be contacted so appropriate action can be taken.

IV. Best Management Practices Plan Objectives

The Federal Water Pollution Control Act Amendments of 1972 and the “Clean Water Act” of 1977 established the objective of restoring and maintaining the chemical, physical, and biological integrity of the nation’s waters. The principal mechanism for the reduction of pollutants from point sources is through the implementation of Pollutant Discharge permits under federal law. Best Management Practices, (BMP) are actions or procedures to prevent or minimize the potential for discharge of any toxic pollutants and hazardous substances in significant amounts to surface waters.

For the SPCC, BMPs are measures used to prevent or mitigate pollution from any type of activity. BMPs are a very broad class of measures and may include processes, procedures, and schedules of activities, prohibitions on practices, and other management practices to prevent or reduce water pollution. In essence, they are anything an employee may identify as a method; to curb water pollution, short of actual treatment. These practices can be inexpensive or very costly. BMP can be just about anything that “does the job” of preventing toxic or hazardous substances from entering the environment.

The SPCC coordinator will have overall responsibility for the BMP plan. Their scope of responsibilities include:

- Providing assistance to management in implementing, maintaining, and updating this plan,
- Identifying toxic and other hazardous substances,

- Identifying potential spill sources,
- Establishing a BMP incident reporting system,
- Developing BMP inspection and record procedures,
- Reviewing environmental incidents,
- Coordinating incident response, cleanup and notification procedures,
- Establish BMP training for MUSC employees,
- Reviewing new construction and changes in processes and procedures,
- Evaluating the effectiveness of the plan.

V. Inventory of Petroleum storage tanks

Call Occupational Safety & Health (792-3604) to obtain a current inventory list.