

## **PHYSICAL PLANT**

### **OPERATING POLICY AND PROCEDURE**

**PP/OP 08.13:** Protection of Storm Water Runoff

**DATE:** March 10, 2011

#### **PURPOSE**

The purpose of this Utilities Operating Policy and Procedure is to ensure that the area of Utilities complies with directives of the Texas Commission on Environmental Quality (TCEQ) by preventing release of city water, well water, or pollutants to the storm water system.

#### **REVIEW**

This PP/OP will be reviewed in February of each odd-numbered year (ONLY) by the utilities chemistry manager (UCM) and recommendations forwarded to the director for utilities.

#### **POLICY AND PROCEDURE**

##### **1. Definitions:**

- a. City Water: Water delivered to the Central Heating and Cooling Plants by the City of Lubbock.
- b. Well Water: Water produced by any well operated by Texas Tech for use in the Utilities plants: Sixth Street Well, Motor Pool Well, Parking Lot Well, Greek Well, or Cotton Patch Well.
- c. TCEQ: Texas Commission on Environmental Quality.
- d. Pollutant: Any chemical or compound which is not naturally occurring and naturally deposited into the storm water system or onto those surfaces which constitute part of the water-shed which drains to the storm water system.
- e. Storm Water System: The system of underground and above ground drainage designed to collect atmospheric precipitation, drain it from buildings and streets, and return it to natural rivers, streams, and lakes.
- f. Water Reuse Sump: A sump at Plant 1 that collects rain water, cooling tower spray, acid station wash water and other sources and returns them to the cooling towers for reuse.
- g. Water Shed: Those surfaces that drain to the storm water system: roof tops, sidewalks, streets, parking lots, or grounds.

## 2. Potential Sources of Storm Water Contamination

- a. West Cooling Tower Trench, CHACP #1: Storm Water will drain into the trench from the roof or driveway of CHACP #1. Potential sources of contamination are: cooling tower drift, bleach leaks from the bleach room, acid spills onto the acid vault cap or the driveway during delivery, bleach spills onto the driveway or bleach building pad during delivery.

Any of these may be spilled immediately into the trench, or if not immediately cleaned, may later wash into the trench. From there the trench drains into the water reuse sump. When the sump reaches high level it is tested and then manually pumped to the cooling towers.

- b. Bleach Room, CHACP #1: Bleach leaks could drain out of the bleach building and into the trench. Leaks could occur during deliveries or system casualties.
- c. Acid Vaults: Leaks or spills could occur during delivery – on the driveway, street, or acid vault cap.
- d. Brine Tanks: Leaks or spills could occur during brine delivery, spilling onto the ground and draining into the trench.
- e. Cooling Towers: Water can drift out of the towers during windy conditions or spill from circulation lines and drain into the West Tower trough or the parking lots of the Museum or ITC.
- f. Chiller Decks: Water from evaporator and condenser maintenance can flood the floor and run into the parking lots.
- g. Chemical Feed Stations: Some of the chemical tanks are filled from outside the buildings. Chemicals could spill onto the ground or concrete pads during transfers.

## 3. Prevention:

- a. Secondary containment should be in place where there is a constant potential for accidental release: for example; a flexible containment berm should be in place across the door of the bleach building to prevent leaks from reaching the trench.
- b. Spill containment kits should be on hand at all chemical delivery sites.
- c. Any maintenance that involves the use or release of city or well water should be planned with consideration for how the release might get to storm-watersheds or

drains. Containment should be in place before the work commences. Two major areas of most concern are: cleanup operations on the West Tower Driveway and the back doors of the plants adjacent to the chiller decks.

4. Response:

In the event water, chemicals, or loose solid materials are released onto storm-watershed surfaces or areas, the following responses should be initiated:

- a. Contain – Use flexible berms or absorbent booms to contain the release or to block off access to the storm drains.
- b. Notify – Notify supervisory personnel of the release.
- c. Cleanup – Supervisory personnel will devise a cleanup plan for each unique situation. City or well water may be used during the cleanup process provided the cleanup water is also contained. No cleanup water should be allowed to reach the storm water drains.

5. Water Reuse Sump:

- a. Suspected water or chemical spills occurring on any of the surfaces draining to the trench will be reported to the Utilities Chemistry Manager who will evaluate the risk before allowing the sump to be pumped to the cooling towers.
- b. Sampling: Any time the water reuse sump is pumped, a 500 ml sample will be collected in a standard polypropylene sample bottle and delivered to Utilities Chemistry personnel. The sample will be analyzed and retained for a period of seven days to satisfy questions of improper discharges. In the event that the sump must be disposed of Environmental Health and Safety will be contacted for disposal information.

6. Reporting

The Utilities Chemistry Manager will maintain a record of all cleanup/disposal operations and storm water sump evacuations and samples.

The Utilities Chemistry Manager will immediately report to Environmental Health and Safety (742-3876) if any spill has occurred on the premises under control of the Utilities Department. In the event any spill reaches a conveyance of storm water the Utilities Chemistry Manager will contact Environmental Health and Safety. In the absence of the Utilities Chemistry Manager the responsibility will fall to the next available Senior Supervisor.

**RESPONSIBILITIES**

POSITION

SECTION

MONTH

Utilities Chemistry  
Manager

Review

February  
(ONY)

REVIEWED: \_\_\_\_\_  
Utilities Chemistry Manager

APPROVED: \_\_\_\_\_  
Director for Utilities