ADVISORY NO. 13.0: UNDERGROUND STORAGE TANKS

INTRODUCTION

The Environmental Protection Agency has recently published final regulations for owners and operators of underground storage tank systems containing "regulated substances". These final regulations establish requirements for leak prevention, leak detection, and corrective action for new and existing underground storage tank systems. An underground storage tank (UST) system means one or more underground storage tanks, connected underground piping, underground auxiliary equipment, and a containment system, if any. A storage tank is considered to be underground if more than 10 percent of its volume, including underground connecting pipes, is below the surface of the ground. A "regulated substance" means either petroleum products or hazardous substances other than hazardous wastes regulated under Subtitle C of the Resource Conservation and Recovery Act. An "existing tank system" is one on which installation has commenced on or before December 22, 1988. A "new tank system" is one on which installation has commenced after December 22, 1988.

DESIGN, CONSTRUCTION, INSTALLATION AND NOTIFICATION

Performance Standards for New UST Systems

- **Tanks** - each tank must be properly designed and constructed and be protected from corrosion.
- **Pipes** - all piping that contains regulated substances and is in contact with the ground must be protected from corrosion.
- **Installation** -All tanks and piping shall be properly installed in accordance with the manufacturer's instructions and either "Petroleum Equipment Institute Publication RP100-90; Recommended Practices for Installation of Underground Liquid Storage Systems" or American Petroleum Institute Publication 1615-87; Installation of Underground Petroleum Storage Systems".

  All owners of newly installed UST systems shall obtain the signature of the installer, who shall be certified pursuant to rule 1301:7-9-11 of the Administrative Code, on either the new facility registration application or the modified registration application required by rule 1301:7-9-04 of the Administrative Code whereby the installer certifies that the installation of the UST system is in compliance with this rule and that all work listed in the manufacturer's installation checklist has been completed.

Upgrading of Existing UST Systems

All existing UST systems were required, before December 22, 1998, to either meet the new UST performance requirements, be upgraded, or be closed.

- **Tank Upgrading** - steel tanks must be upgraded by using an internal lining, or cathodic protection, or both.
- **Pipe Upgrading** - metal piping that contains regulated substances and is in contact with the ground must be cathodically protected.
- **Spill and Overfill Prevention** - spill prevention equipment that will prevent the release of the regulated substance to the environment must be used. Overfill prevention equipment that will automatically shut off or alert the transfer operator must be used.
- **Closure of UST Systems**
- **Temporary Closure** - maintenance of corrosion protection must be continued during temporary closure. When the UST system has been temporarily closed for more than 12 months the owners and operators must permanently close the UST system if it does not meet the performance standards of "new UST systems" or the upgrading requirements, except that the spill and overfill equipment requirements do not have to be met.
- **Permanent Closure and Changes in Services** - tanks must be empty and clean prior to a change

in service or permanent closure. An assessment of the UST site must be made to detect the presence of contamination before the UST can permanently closed or have a change in service. Records must be maintained to demonstrate compliance with closure requirements.

RELEASE DETECTION

General Requirements

Owners and operators must provide a method of release detection that can detect a release from any portion of the tank and the connected underground piping

Requirements for Petroleum UST Systems

Tanks that do not met the performance requirements for "new UST systems" must be monitored for release at least every 30 days. Tanks that do meet these requirements may use tank tightness testing at least every five years.

Requirements for Hazardous Substance UST Systems

Existing UST systems must meet the requirements for petroleum UST systems. By December 22, 1998, all existing hazardous substance UST systems must meet the following requirements for new hazardous substance UST systems:

> Tanks should be double-walled or have secondary containment systems and piping must have secondary containment

Methods of Release Detection for Tanks

a) Inventory
b) Manual tank gauging
c) Tank tightness testing
d) Automatic tank gauging
e) Vapor monitoring
f) Groundwater monitoring
g) Interstitial monitoring
h) Other approved methods

Methods of Release Detection for Piping

Automatic line leak detectors

Line tightness testing

Methods e - h in the previous section

Exemptions

The new EPA regulations contain two exemptions which affect UST's at the University.

- The regulations do not include any "tank used for storing heating oil for consumptive use on the premises where stored". These UST's therefore are not presently required to be upgraded as per the new regulations. However, it is expected that the EPA will expand the law to include UST heating oil tanks within one or two years. The previous statement was made by Mike Nimocks of the Ohio Fire Marshal's Bureau of UST's.
- There is a deferral for "any UST system that stores fuel solely for use by emergency power generators". These types of systems do not have to meet the requirement for release detection. They still have to meet the other requirements for notification, spill control, release reporting, closure, etc. It is unknown when or if this deferral will be changed.