

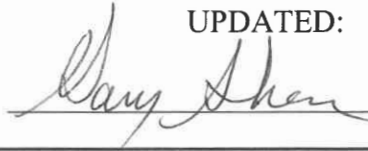
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POLICY: IV:09 - Underground Storage Tanks  
Policy Review: Annually

DATED: February 1997  
UPDATED: April 2024

APPROVED: Executive Director of Facilities and Construction:



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I. PURPOSE

- A. The purpose of this procedure is to inform and protect university employees, students, and the public and to ensure compliance with regulations established for underground storage tanks as outlined by the Environmental Protection Agency (EPA), the Virginia Department of General Services, the Virginia Water Control Board, and the Virginia Department of Environmental Quality.
- B. The intent and contents of this procedure are to reflect and refer to the requirements as they apply to the university and particularly the Virginia Water Control Board, 9VAC25-580 and 590, underground storage tanks; technical standards and corrective action required, which are used as the basis for this procedure. Any updates to 9VAC25-580 and 590 shall alter/supplement this procedure as necessary. All paragraph references contained herein are in reference to 9VAC25-580 and 590 unless otherwise stated.
- C. This policy also provides guidance to JMU employees regarding management of unregulated USTs. These would be tanks that store heating oil consumed onsite that are exempt from regulation under 9VAC25-580. Guidance regarding the minimum best management practices (BMPs) for those USTs are a requirement for such exempt tanks at the University. For the purposes of this policy, regulated USTs are those subject to 9VAC25-580. If the tank is exempt, or otherwise not subject to 9VAC25-580 regulations, then the tank is considered an unregulated UST.

The current listing of USTs at the JMU campus to which this policy applies are noted in Table 1.

**Table 1 – Current USTs at the JMU Campus**

<b>Tank Location</b>	<b>Tank Size/Contents</b>	<b>Install Date</b>	<b>Regulated or Unregulated UST</b>
Maintenance Center	2,000-gallon diesel	1/1/1986	Regulated
Maintenance Center	10,000-gallon gasoline	9/1/1992	Regulated
1077 South Main Street	1,000-gallon No. 2 fuel oil	2002	Unregulated
Power Plant	50,000-gallon No. 2 fuel oil/heating oil	12/2010	Unregulated
Power Plant	50,000-gallon No. 2 fuel oil/heating oil	12/2010	Unregulated

**II. DEFINITIONS**

The following words and terms, when used in this procedure, shall have the following meaning, unless the context clearly indicates otherwise:

- A. Release - Any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into groundwater, surface water or subsurface soils.
- B. Corrective Action - Actions necessary to abate, contain, and cleanup a release from an underground storage tank, to mitigate the public health or environmental threat from such releases and to rehabilitate state waters in accordance with 9VAC25-580 and 590. The term does not include those actions normally associated with closure or change in service or the replacement of an underground storage tank.
- C. Department – Department of Environmental Quality (DEQ)’s Division of Land Protection and Revitalization is responsible for overseeing compliance by regulated entities with the Underground Storage Tank regulations in the Commonwealth of Virginia.
- D. Department of Waste Management - The Virginia Department of Waste Management which has jurisdiction over the proper handling and disposal of solid and hazardous wastes in the Commonwealth of Virginia.
- E. Occurrence - An accident, including continuous or repeated exposure to conditions, which result in a release from an underground storage tank.

Note: This definition is intended to assist in the understanding of this regulation and is not intended either to limit the meaning of occurrence in a way that conflicts with standard insurance usage or to prevent the use of other standard insurance terms in a place of "occurrence".

- F. Owner or Operator - When the owner or operator are separate parties, refers to the party that is obtaining or has obtained financial assurances. JMU is both the owner of UST systems and operator in control of, or having responsibility for, the daily operation of the UST system.
- G. Regulated substance - An element, compound, mixture, solution, or substance that, when released into the environment, may present substantial danger to the public health or welfare, or the environment. The term "regulated substance" includes:
  - i. Any substance defined in § 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 USC § 9601 et seq.), but not any substance regulated as a hazardous waste under subtitle C of the Resource Conservation and Recovery Act (RCRA) of 1976 (42 USC § 6901 et seq.); and
  - ii. Petroleum, including crude oil or any fraction thereof, that is liquid at standard conditions of temperature and pressure (60°F and 14.7 pounds per square inch absolute). The term "regulated substance" includes petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.
- H. Release detection - Determining whether a release of a regulated substance has occurred from the UST system into the environment or a leak has occurred into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

For a complete list of definitions, please refer to [9VAC25-580-10](#).

### III. RESPONSIBILITIES

- A. Executive Director of Facilities and Construction shall ensure the campus community is kept informed/updated of any regulations or required changes that may have a direct effect on the physical wellbeing/health and safety of the total campus community.
- B. Director of Engineering and Construction shall appoint the UST Program Coordinator.
- C. UST Program Coordinator shall coordinate projects/programs (subject to funding availability) to ensure the University complies with requirements and/or regulations as specified in 9VAC 25-580 and 590. The UST Program Coordinator is currently assigned to the University Stormwater Coordinator.
- D. Project managers shall ensure contractors performing work or firms providing service comply with all applicable codes, specifications, requirements and safety regulations during the performance and duration of their contract(s).
- E. Directors and managers shall ensure Facilities Management (FM) employees comply with relevant safety practices and procedures pertaining to handling of petroleum products, UST's and related items.
- F. Building coordinators shall immediately notify occupants of their building(s) of any potential danger or health hazard as notified and directed by the Executive Director of Facilities and Construction or the UST program coordinator.
- G. The Burner Shop, Power Plant, Transportation Department Garage and Engineering staff are responsible for periodic surveillance of condition(s) of UST systems, piping, monitoring

equipment, manholes, filler pipes and related UST equipment, along with providing necessary reports and supporting documentation as needed for submission to the Department as requested for regulated UST's.

#### IV. PROCEDURE

##### A. Design, Construction, Installation, Permitting, Inspection and Notification Requirements for all UST Systems

###### 1. Performance standards for new UST systems (9VAC25-580-50):

- a. Tanks and piping installed or replaced must be secondarily contained and use interstitial monitoring in accordance with subdivision 7 of 9VAC25-580-160, except for suction piping that meets the requirements of subdivisions 2 a (2) (a) through (e) of 9VAC25-580-140. Secondary containment must be able to contain regulated substances leaked from the primary containment until they are detected and removed and prevent the release of regulated substances to the environment at any time during the operational life of the UST system. For cases where the piping is considered to be replaced, the entire piping run must be secondarily contained.
- b. The university is required to obtain a permit, conduct the required inspections and acquire a Certificate of Use issued in accordance with the provisions of the Virginia Uniform Statewide Building Code.
- c. The UST system must be properly installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory (e.g. American Petroleum Institute (API), Petroleum Equipment Institute (PEI), and/or National Fire Protection Association (NFPA)), and in accordance with the manufacturer's instructions. No UST system shall be installed or placed into use without obtaining the required permit, inspections and Certificate of Use from the building official under the provisions of the Virginia Uniform Statewide Building Code. In the case of State-owned facilities, the Department of General Services shall function as the building official in accordance with Paragraph 36-98.1 of the Code of Virginia.
- d. The University must submit notice of a regulated underground storage tank system's existence to the board within 30 days of bringing the underground storage tank system into use. Owners must submit a certification of compliance on the UST Notification form approved by the Department, which currently is Form 7530-3 (available at [deq.virginia.gov](http://deq.virginia.gov)).
- e. All owners and operators of new UST systems must certify in the notification form compliance with the following requirements:
  1. Installation of tanks and piping under subdivision 5 of 9VAC25-580-50.
  2. Cathodic protection of steel tanks and piping under subdivisions 1 and 2 of 9VAC25-580-50.
  3. Financial responsibility under financial responsibility regulations promulgated by the board under 9VAC25-590.
  4. Release detection under 9VAC25-580-140 and 9VAC25-580-150.

2. Performance standards for modified regulated UST systems:
  - a. In all instances of upgrade, repair and closure where a UST system is enlarged, altered, repaired or closed all UST systems must be permitted and inspected in accordance with the provisions of the Virginia Uniform Statewide Building Code and all applicable Federal, State and local codes and requirements. For state-owned facilities, the Department of General Services shall function as the building official in accordance with § 36-98.1 of the Code of Virginia. A permit from the building official must be obtained prior to upgrading any UST system. No upgraded UST system shall be placed into use unless and until the system is inspected.
  - b. Any change in ownership, tank status, tank/piping systems, or substance stored in regulated UST systems requires JMU to submit an amended UST Notification form (Form 7530-3), within 30 days after such change or upgrade occurs, or is brought into use (9VAC25-580-70 A. and B. and 9VAC25-580-120 1.a. and 1.b.).

#### B. Corrosion Protection

1. Regulated USTs and associated piping must incorporate appropriate corrosion protection in their design to meet the requirements of 9VAC25-580-50 and 90. The two existing regulated USTs at the maintenance center have existing corrosion protection through STI-P3 design (coated steel tank with sacrificial anodes) and fiberglass piping.
2. Operate and maintain the corrosion protection system as required by manufacturer's recommendations. Testing of the corrosion protection system shall be conducted within six months of installation and at least every three years thereafter by a qualified third party following accepted code (e.g. NACE, API, Underwriters Laboratories, or Steel Tank Institute).
3. Maintain records at a minimum of the last two inspections.
4. Nonregulated UST systems are not required to have corrosion protection systems installed, but it is highly recommended as a best management practice to enhance the lifetime of the UST system and prevent releases. In the event a corrosion protection system is designed with an unregulated UST and associated piping, ensure the system is operated, maintained and tested in accordance with manufacturer's recommendations and/or applicable codes, and associated records maintained.

#### C. Spill and Overfill Control

1. The University must ensure that spills or releases during fuel transfers do not occur. To prevent spilling and overfilling associated with product transfer to the regulated UST systems, JMU must use and maintain spill prevention equipment when the transfer hose is detached from the fill pipe (9VAC25-580-50 3).
  - a. JMU currently utilizes spill buckets at the fill port for each of the two regulated tanks.

- b. JMU must test at least once every three years the spill buckets following an approved method developed by the manufacturer, or an acceptable code of practice developed by a nationally recognized association or independent laboratory.
  - c. JMU must conduct monthly walkthrough inspections of the spill prevention equipment following an approved method.
  - d. Maintain records of the tests and inspections for at least three years.
  - e. JMU must ensure overfill prevention equipment is installed, operated and maintained on regulated USTs to automatically shut off flow into the tank when the tank is no more than 95% full. JMU shall ensure that the overfill prevention equipment is inspected at least once every three years by an approved method. At a minimum, the inspection must ensure that the overfill prevention equipment is set to activate at the correct level and will activate when regulated substance reaches that level.
2. JMU shall conduct annual walkthrough inspections of any containment sumps and any handheld release detection equipment associated with the regulated USTs following an approved method. Records of such inspections shall be maintained for at least three years.
  3. The unregulated USTs are not required to have spill prevention equipment by regulation; however, it is JMU policy as a best management practice to incorporate spill prevention equipment like spill buckets or similar for the unregulated UST systems, to minimize the impacts of spills during fuel transfers.
  4. The unregulated USTs are not required to have overfill prevention equipment by regulation; however, it is JMU policy as a best management practice to incorporate overfill prevention equipment like high level alarms and interlocks, or similar for the unregulated UST systems, to prevent overfills during fuel loading.
  5. During fuel transfers to USTs, an individual assigned by FM will be present during all tank-filling operations. Prior to filling any UST, approval will be obtained from a representative of FM. A FM representative must ensure the volume available in the tank receiving the fuel transfer is greater than the volume of product to be transferred to the tank before the transfer is made, and that the transfer operation is monitored constantly to prevent overfilling and spilling.
  6. JMU staff is responsible for, or assigned to be present during fuel transfers to any UST, shall be familiar with, and have valid training on, the Spill, Prevention, Control and Countermeasures (SPCC) plan for the University. Specifically, Section 2.9 of the current SPCC plan includes procedures that must be followed during each fuel transfer, as well as available access to adequate spill response equipment.
  7. In the event of a discharge, the assigned FM employee will notify the JMU HAZWOPER Team via Work Control (540) 568-6101 immediately. JMU staff must report, investigate, and clean up any spills, overfills, and releases in accordance with Section V of this policy and Section 3.2 and 3.3 of the SPCC plan.

#### D. Leak/Release Detection

1. The University must provide a method, or combination of methods, of release detection for all new and existing regulated UST systems that can detect a release from any portion of the tank and the connected underground piping that routinely contains product, and is installed and calibrated in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running conditions.
2. The leak/release detection system must include one or a combination of methods required by 9VAC25-580-130 and 140 depending on whether the UST was installed prior to, or after, September 15, 2010.
3. Since the two regulated USTs were installed before September 15, 2010 and an automatic tank gauging system (e.g. a Veeder-Root monitoring system) is used for leak/release detection, the following methods of leak/release detection shall be conducted by JMU staff:
  - a. Monitor for releases at least every 30 days;
  - b. Conduct monthly inventory control to detect a release of at least 1% of flow-through plus 130 gallons on a monthly basis in the following manner:
    - i. Record inventory volume measurements for inputs, withdrawals, and the amount still remaining in the tank each operating day;
    - ii. Use equipment recording the information in 3.b.i. above that is capable of measuring the level of product over the full range of the tank's height to the nearest 1/8 of an inch;
    - iii. Reconcile inputs with delivery receipts by measurement of the tank inventory volume before and after delivery;
    - iv. Ensure deliveries are made through a drop tube that extends to within one foot of the tank bottom;
    - v. Product dispensing is metered and recorded according to regulations of the Bureau of Weights and Measures of the Virginia Department of Agriculture and Consumer Services for meter calibration within their jurisdiction; and
    - vi. The measurement of any water level in the bottom of the tank is made to the nearest 1/8 of an inch at least once a month.
4. JMU staff shall verify and maintain documentation that the piping for regulated tanks installed before September 15, 2010 meets the Criteria for Safe Suction piping per 9VAC25-580-140. If that is the case, no release detection is necessary for this piping associated with regulated USTs.
5. JMU shall ensure the regulated USTs are operated and maintained, and electronic and mechanical components are tested for proper operation, in accordance with one of the following: (i) manufacturer's instructions; (ii) a code of practice developed by a nationally recognized association or independent testing laboratory; or (iii) requirements determined by the board to be no less protective of human health and the environment than the two options listed in subdivisions 1 and 2 of 9VAC25-580-130. A test of the proper operation must be performed at least annually and, at a minimum, as applicable to the facility, cover the components and criteria noted in 9VAC25-580-130 A.3. Records are to be maintained for at least three years.

6. If the tests of the leak/release detection equipment noted in D.5. above indicate a release, report the release to the Department in accordance with the procedures noted in Section V of this policy.
7. The unregulated USTs are not required to incorporate the leak/release detection requirements by regulation; however, such systems are a JMU best management practice where practical to detect potential leaks or releases to the environment. Currently, the two unregulated USTs at the Power Plant utilize automatic tank gauging with a Veeder-Root monitor, supplemented with inventory management for leak/release detection. Manual tank gauging is conducted on the UST at South Main Street to evaluate potential leaks/releases. JMU shall continue to operate, maintain, and conduct inventory measurements as a means of leak/release detection for these tanks. Associated records shall be maintained for at least three years.

#### E. Operator Training

1. The University shall designate staff who have management, supervisory and operational responsibilities with the regulated UST systems as Class A, B or C operators within 60 days of those staff assuming those duties, and refresher training conducted every three years.
2. Training of designated UST operators shall include the details noted by their designated Class as noted in 9VAC25-580-125C.
3. Training documentation shall be maintained for at least three years as defined by the UST Program Coordinator.
4. Written instructions shall be prepared for the regulated UST systems that provide procedures for Class C operators to follow to provide notification in the event of an emergency with the UST system. Class C operators shall be advised of these procedures within 60 days of taking on responsibilities for the regulated UST systems, and advisement made annually thereafter.
5. While training of JMU staff operating and maintaining unregulated USTs is not required by regulation, it is a JMU best management practice to have these staff obtain training on the operation of the USTs, their associated leak/release detection systems, and spill/release procedures at least at the initiation of the assumption of their roles in UST operation.
6. JMU staff responsible for fuel transfers from any UST system shall receive training on the overview of the spill response procedures and fuel transfer procedures noted in the current SPCC plan for the University. This training (as noted in the current SPCC plan) shall include at a minimum instruction on discharge prevention procedures, the actions to take in the event of a discharge, the use of discharge response equipment, applicable regulations pertaining to oil discharges, general facility operations, and the contents of the current SPCC Plan.

This instruction will be conducted for employees according to the following schedule:

- a. Employees who currently have oil-handling responsibilities will be instructed within 6 months after implementation of the SPCC Plan;



- b. Employees who are newly assigned oil-handling responsibilities will be instructed within one month after assuming such responsibilities; and
- c. Employees with oil-handling or emergency response responsibilities will receive 40-hour HAZWOPER training with annual 8-hour updates.

7. Records of training shall be maintained for at least three years.

## V. INVESTIGATING, REPORTING AND CLEANUP OF SPILLS AND OVERFILLS

A. The university is responsible for containing and immediately cleaning up a spill or overfills and report to the board within 24 hours and begin corrective action in accordance with part VI in the following cases (9VAC25-580-220A):

1. Spill and overflow of petroleum resulting in a release to the environment that exceeds 25 gallons, or that causes a sheen on nearby surface water.
2. Spill or overflow of a hazardous or regulated substance resulting in a release to the environment that equals or exceeds its reportable quantity under CERCLA (40 CFR Part 302).

B. Maintenance must contain and immediately clean up a spill or overflow of petroleum that is less than 25 gallons and a spill or overflow of a hazardous or regulated substance that is less than the reportable quantity. If a cleanup cannot be accomplished within 24 hours, the UST program coordinator must immediately notify the Department (DEQ).

NOTE: Pursuant to 40 CFR Paragraphs 302.6 and 355.40, a release of a hazardous substance equal to or in excess of its reportable quantity must also be reported immediately (rather than within 24 hours) to the National Response Center under paragraphs 102 and 103 of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980 and to appropriate state and local authorities under Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986.

C. Should any suspected or confirmed releases occur, they are required to be reported to the Department within 24 hours of discovery. Suspected releases can include:

1. The discovery by owners and operators or others of released regulated substances at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water).
2. Unusual operating conditions observed by owners and operators (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, an unexplained presence of water in the tank, or liquid in the interstitial space of secondarily contained systems), unless:
  - a. The system equipment or component is found not to be releasing regulated substances to the environment;
  - b. Any defective system equipment or component is immediately repaired or replaced; and
  - c. For secondarily contained systems, except as provided for in subdivision 7 b (4) of [9VAC25-580-160](#), any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed.
3. Monitoring results, including investigation of an alarm, from a release detection method required under [9VAC25-580-140](#) and [9VAC25-580-150](#) that indicate a release may have occurred unless:

- a. The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result;
- b. The leak is contained in the secondary containment and:
  - (1) Except as provided for in subdivision 7 b (4) of [9VAC25-580-160](#), any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed; and
  - (2) Any defective system equipment or component is immediately repaired or replaced;
- c. In the case of inventory control, described in subdivision 1 of [9VAC25-580-160](#), a second month of data or in the case of manual tank gauging, a second week or month as prescribed in the chart under subdivision 2 d of [9VAC25-580-160](#) does not confirm the initial result or the investigation determines no release has occurred; or
- d. The alarm was investigated and determined to be a nonrelease event (for example, from a power surge or caused by filling the tank during release detection testing).

Should a confirmed release require corrective action or investigation, conduct those activities according to the requirements in 9VACS25-580-230 through 330. Documentation generated during the investigation shall be retained indefinitely. D. JMU has a process for conducting, documenting and reporting suspected or confirmed releases as part of the University's Spill, Prevention, Control and Countermeasures (SPCC) Plan (refer to Section 3.0 of the current SPCC Plan). JMU staff shall follow those procedures should a suspected or confirmed release be identified.

#### VI. TEMPORARY OR PERMANENT UST CLOSURE

JMU shall follow the requirements of [9VAC25-580-310](#), [320](#), [330](#), and [350](#) if any USTs require either temporary or permanent closure.

#### VII. POWER OF CONTRACTOR TO ACT IN AN EMERGENCY

- A. In case of an emergency, which threatens loss or injury of property and/or safety of life, the Contractor will be allowed to act without previous instructions from the Engineering department as they see fit. The contractor shall notify the Engineering department immediately thereafter.
- B. Any compensation claimed by the contractor due to such extra work shall be submitted to the Engineering department for approval.
- C. Where the contractor has not taken action but has notified the Engineering department of an emergency threatening injury to person or damage to the work, or any adjoining property, the contractor, upon authorization from the Engineering department, shall act as instructed or authorized by the Engineering department. The amount of reimbursement claimed by the contractor charged against such action shall be determined in the manner provided by the contract for approval of compensation to be paid for extra work.

#### VIII. Organizations and References for Tank Information

- A. ACT - Association for Composite Tanks
- B. API - American Petroleum Institute
- C. Fiberglass Petroleum Tank and Pipe Institute
- D. NACE -National Association of Corrosion Engineers
- E. NFPA -National Fire Protection Association

- F. NLPA -National Leak Prevention Association
- G. PEI - Petroleum Equipment Institute
- H. Steel Tank Institute (STI)
- I. Department of Waste Management
- J. State Water Control Board
- K. Virginia Department of Environmental Quality (DEQ), Valley Regional Office