Table of Contents

1. Introduction .................................................................................................................. 2

2. Definitions .................................................................................................................... 2

3. Roles and Responsibilities ......................................................................................... 5
   3.1 EHS ......................................................................................................................... 5
   3.2 College/Unit .......................................................................................................... 5

4. Regulatory and Operational Scope ............................................................................ 6
   4.1 Scope of Covered CU Facilities and Operations .................................................. 6
   4.2 Applicable Regulations and Aspect Overview .................................................... 6
      4.2.1 Aboveground Petroleum Storage Tanks ....................................................... 6
      4.2.2 Underground Petroleum Storage .................................................................. 7
      4.2.3 Major Oil Storage ......................................................................................... 7
      4.2.4 Chemical Bulk Storage ................................................................................ 7

5. Recordkeeping, Reporting & Monitoring ................................................................. 8
1. Introduction

This Cornell University Bulk Storage Compliance manual is intended for use by personnel at Cornell University (CU) responsible for the inspection, care and maintenance of bulk storage tanks which store petroleum and chemicals. This manual is designed to assist University personnel in achieving and maintaining compliance with Federal, State and Local bulk storage regulations. Implementation of requirements and recommendations provided in this manual will help to ensure protection of the environment from petroleum and chemical releases.

2. Definitions

- "Aboveground tank" means any stationary tank which is not entirely covered with earth or other material, or any tank which can be inspected in a subterranean vault.
- "Cathodic protection" means corrosion protection for an underground metal tank or pipe by causing a continuous electric current to flow from one or more electrodes or a sacrificial anode to the protected structure.
- “Category 1 tank system” means any tank system whose tank was installed before December 27, 1986.
- “Category 2 tank system” means any tank system whose tank was installed from December 27, 1986 through October 11, 2015.
- “Category 3 tank system” means any tank system whose tank was installed after October 11, 2015.
- “Class A operator” means the individual who has primary responsibility to operate and maintain the UST system(s) at a facility in accordance with applicable requirements of this Part. The class A operator typically manages resources and personnel to achieve and maintain compliance with the requirements of this Part.
- “Class B operator” means the individual who has day-to-day responsibility for implementing applicable requirements of this Part. The class B operator typically implements field aspects of operation, maintenance, and associated recordkeeping for a UST system.
- “Class C operator” means the individual who has primary responsibility for initially addressing emergencies presented by a spill or release from a UST system. The class C operator typically controls or monitors the dispensing or sale of petroleum.
- "Combined storage capacity" means the sum of the design storage capacity of each tank at a facility which has not been permanently closed.
  - “Design capacity” means the amount of petroleum that a tank is designed to hold. If a certain portion of a tank is unable to store petroleum because of its integral design (for
example, electrical equipment or other interior components take up space), the design capacity of the tank is thereby reduced. Actions taken to physically alter the design capacity of a tank (such as drilling a hole in the side of the tank so that it cannot hold petroleum above that point) will not change the design capacity of the tank.

- “Facility” means a single property, or contiguous or adjacent properties used for a common purpose which are owned or operated by the same person or persons, on or in which are located:
  
  (1) one or more tank systems having a combined storage capacity of more than 1,100 gallons (including a major facility); or
  
  (2) an underground tank system having a storage capacity that is greater than 110 gallons.

(3) this term does not include:

  (i) any operational tank system;

  (ii) any temporary tank system;

  (iii) any tank system that is part of a facility that has been constructed, acquired, or operated in accordance with a Certificate of Public Convenience and Necessity issued by the Federal Energy Regulatory Commission pursuant to the terms of 15 U.S.C. section 717f;

  (iv) any heating oil tank system used for on-premises consumption that is not interconnected to any other heating oil tank system and which has a storage capacity of less than 1,100 gallons, unless such tank system is located on a property that has another tank system or set of tank systems that otherwise independently meets the definition of facility under paragraph (1) or (2) of this subdivision;

  (v) any tank system that has a storage capacity of 1,100 gallons or less and is used to store motor fuel for non-commercial purposes (not for resale) at a farm or residence, unless such tank system or systems are located on a property that has another tank system or set of systems that otherwise independently meets the definition of facility under paragraph (1) or (2) of this subdivision;

  (vi) any tank system that is used to store or contain asphalt cement (however, a tank system used to store or contain asphaltic emulsions is included);

  (vii) any tank system that has been permanently closed in accordance with sections 613-2.6(b), 613-3.5(b), or 613-4.5(b) of this Part;

  (viii) pipelines that enter or leave the property; or

  (ix) any wastewater treatment tank system.

  - “Farm” means a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. Farm includes fish hatcheries, rangeland, and nurseries with growing operations.

  - "Leak monitoring system" means a leak detection system as required in sections 614.5 and 614.11 and paragraph 614.14(g)(3) of this Title.
Bulk Storage Program

- “MOSF” means Major Oil Storage Facility with combined design capacity of more than 400,000 gallons of oil storage.
- "Non-stationary tank" means any tank which in practice and design is mobile including tanks on wheels, trolleys, skids, pallets or rollers, and vessels such as a 55-gallon drum.
- “Operator” means any person who leases, operates, controls, or supervises a facility.
- “Permanently closed” means an out-of-service storage tank or facility which has been closed in a manner prescribed by subdivision 613.9(b) of this Title.
- “Petroleum” means:
  (i) crude oil and any fraction thereof;
  (ii) synthetic forms of lubricating oils, dielectric oils, insulating oils, hydraulic oils, and cutting oils;
  (iii) any complex blend of hydrocarbons that is not derived from crude oil; or
  (iv) any petroleum mixture.
- “Petroleum” does not include:
  (i) any hazardous substance covered under subdivision (aa) of this section, except as may be part of a blend described in paragraph (at)(2) of this section;
  (ii) animal or vegetable oils; or
  (iii) substances that are gases at standard temperature and pressure.
- “Release” means any intentional or unintentional action or omission resulting in the releasing, discharging, spilling, leaking, pumping, pouring, emitting, emptying or dumping of petroleum into the waters of the State or onto lands from which it might flow or drain into said waters, or into waters outside the jurisdiction of the State when damage may result to lands, waters, or natural resources within the jurisdiction of the State. A leak or spill of petroleum into secondary containment, including soil that is used as part of secondary containment, does not constitute a release.
- “Secondary containment” means containment that prevents any spilled or leaked petroleum from reaching the land or water outside the containment before cleanup occurs.
- "Spill" or "spillage" means any escape of petroleum from the ordinary containers employed in the normal course of storage, transfer, processing or use.
- "Stationary tank" means all underground tanks or any aboveground tank which is non-mobile. Examples of stationary aboveground tanks include tanks which may rest on the ground or may be fixed or permanently in place on foundations, racks, cradles, or stilts.
- "Storage facility" See "Facility".
- "Tightness test" means a test which is performed in a manner consistent with the criteria set forth in paragraph 613.5(a)(6) of this Title.
3. Roles and Responsibilities

3.1 EHS

- Communicate regulatory requirements and any changes which will impact operations.
- Provide knowledge and training of the on-line tank inspection monitoring system. Communicate with IT if the system fails or any changes need to be made to the inspection information.
- Verify that inspections are being performed and documented on the required periodic basis.
- Provide labels and any signage to be posted at the facility.
- Obtain registrations for new petroleum tanks, renew existing registrations and obtain modified registrations if changes occur to storage types or amounts.
- Provide copies of the registration to the facility to post.
- Remind facilities of upcoming testing requirements.
- Provide regulatory assistance for tank removals, upgrades, replacement projects or changes to existing operations which would impact current petroleum storage.
- Provide contact for facility in the event of an unplanned release. Advise and assist with regulatory requirements and corrective actions.
- Provide support and guidance during regulatory inspections.

3.2 College/Unit

- Post registration certificates in accessible site for review by regulatory agency.
- Conduct required regulatory tank inspections (monthly/weekly) so as to meet compliance requirements for the respective facility storage tanks.
- Notification of product change, quantities or other storage modification.
- Notification of designated inspector changes for required on-line inspections.
Bulk Storage Program

- Periodically check tanks for leaks and other types of damage (beyond required inspections).
- Check secondary containment for water accumulation and properly dispose of excess.
- Ensure the proper signage and markings are visible and in good condition.
- Ensure the spill kits are accessible, current and able to be used if needed.
- Train all oil handling employees how to respond if a spill occurs.
- Train all oil handling employees how to report a release if needed.
- Notify EHS if regulatory personnel contact or visit the facility.

4. Regulatory and Operational Scope

The Bulk Storage Program encompasses numerous Federal, State and local laws and regulations. The program areas are administered by the Environmental Health and Safety Office (EHS) to ensure Cornell University-wide compliance with these associated regulations. Cornell facilities located outside of New York State will be subject to their respective state laws. Management of the Bulk Storage Program is broken down into several functional subprograms. The subprogram areas listed below are included in the overall Bulk Storage Compliance Program.

- Aboveground Petroleum Storage Facilities
- Underground Petroleum Storage Facilities
- Major Oil Storage Facilities
- Chemical Bulk Storage

4.1 Scope of Covered CU Facilities and Operations

All Cornell University facilities and operations in the U.S. are within the scope of the Bulk Storage program. The nature of the facility, its operations, and activities taking place will determine if specific environmental regulatory requirements are applicable. Therefore, specific requirements will vary between facilities and respective operations.

Petroleum Bulk Storage currently is applicable to the College of Agriculture and Life Sciences, the College of Veterinary Medicine, Weill Medical Center, Facilities Services, and Cornell Transportation Department.

4.2 Applicable Regulations and Aspect Overview

4.2.1 Aboveground Petroleum Storage Tanks – University activities/operations designed to prevent releases of oil from Aboveground Petroleum Storage Tanks (ASTs)
Bulk Storage Program

required to comply with following regulations:
- Resource Conservation and Recovery Act 42 USC § 6691
- Solid Waste Disposal Act P.L. 89 - 272
- Title 10 NYS ECL § 17-1001
- 6NYCRR Part 613
- 40 CFR PART 112

4.2.2 Underground Petroleum Storage – University activities/operations designed to prevent releases of oil from Underground Petroleum Storage Tanks (USTs) required to comply with following regulations:
- Navigation Law Article 12
- 40 CFR Part 280
- ECL 17-1009
- 6NYCRR Part 613

4.2.3 Major Oil Storage
- Resource Conservation and Recovery Act 42 USC § 6691
- Solid Waste Disposal Act P.L. 89 - 272
- Title 10 NYS ECL § 17-1001
- 6NYCRR Part 613
- 40 CFR PART 112

4.2.4 Chemical Bulk Storage
- Resource Conservation and Recovery Act 42 USC § 6691
- 6NYCRR Parts 596,597,598,599
5. Recordkeeping, Reporting & Monitoring

<table>
<thead>
<tr>
<th>Program Area</th>
<th>Aspects</th>
<th>Recordkeeping, Reporting, or Monitoring Activity</th>
<th>Frequency</th>
<th>Responsibility</th>
<th>Internal or External Deliverable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aboveground Petroleum Bulk Storage</strong></td>
<td>Total tanks 185 on campus and remote research locations</td>
<td>State PBS registration of bulk petroleum tanks.</td>
<td>5 years</td>
<td>EHS</td>
<td>External – NYS DEC</td>
</tr>
<tr>
<td></td>
<td>Posting of PBS registration certificate</td>
<td>Upon issuance from regulatory agency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monthly inspection and record retention</td>
<td>Monthly inspections, record retention for 10 years.</td>
<td></td>
<td>Unit/Facility Manager</td>
<td>Internal CU</td>
</tr>
<tr>
<td></td>
<td>Labeling</td>
<td>Continuous</td>
<td></td>
<td>Unit/Facility Manager, EHS Program Specialist</td>
<td>Internal CU</td>
</tr>
<tr>
<td><strong>Underground Storage Tanks</strong></td>
<td>Total 2 on campus and remote research locations</td>
<td>State PBS registration of bulk petroleum tanks.</td>
<td>5 years</td>
<td>EHS</td>
<td>External – NYS DEC</td>
</tr>
<tr>
<td></td>
<td>Posting of PBS registration certificate</td>
<td>Upon issuance from regulatory agency</td>
<td></td>
<td>EHS: distribution of certificate</td>
<td></td>
</tr>
</tbody>
</table>

The most recent version of this document is available electronically at: [https://sp.ehs.cornell.edu/env/bulk-material-storage/petroleum-bulk-storage/Documents/BulkStorageProgramIIrev1.pdf](https://sp.ehs.cornell.edu/env/bulk-material-storage/petroleum-bulk-storage/Documents/BulkStorageProgramIIrev1.pdf)
<table>
<thead>
<tr>
<th>Activity</th>
<th>Frequency</th>
<th>Responsible Party</th>
<th>Retention Required</th>
<th>Access to Regulatory Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly inspection and record retention</td>
<td>Monthly inspections, record retention for 10 years. (NYSDEC) Minimum 1 year (EPA)</td>
<td>Unit/Facility Manager</td>
<td>Internal – CU Inspection results accessible to regulatory agency-DEC, EPA</td>
<td></td>
</tr>
<tr>
<td>Annual line testing for pressurized piping</td>
<td>1 year retention</td>
<td>Unit/Facility Manager</td>
<td>Internal-CU Inspection results accessible to regulatory agency-DEC, EPA</td>
<td></td>
</tr>
<tr>
<td>Annual Cathodic testing</td>
<td>3 year minimum retention</td>
<td>Unit/Facility Manager</td>
<td>Internal-CU Inspection results accessible to regulatory agency-DEC, EPA</td>
<td></td>
</tr>
<tr>
<td>Monitor for traces of petroleum</td>
<td>Weekly</td>
<td>Unit/Facility Manager</td>
<td>Internal-CU Inspection results accessible to regulatory agency-DEC, EPA</td>
<td></td>
</tr>
<tr>
<td>Labeling</td>
<td>Continuous</td>
<td>Unit/Facility Manager, EHS Program Specialist</td>
<td>Internal CU</td>
<td></td>
</tr>
<tr>
<td>Tank Closure reports if a tank is phased out</td>
<td>continuous</td>
<td>EHS</td>
<td>Internal, accessible to regulatory agency-DEC, EPA</td>
<td></td>
</tr>
<tr>
<td>Certification for A/B, A or B operator</td>
<td>One time DEC testing requirement</td>
<td>Facility operators, EHS program specialists</td>
<td>Internal</td>
<td></td>
</tr>
<tr>
<td>Tank and piping As-</td>
<td>On hand for DEC</td>
<td>Facility staff and</td>
<td>Internal</td>
<td></td>
</tr>
</tbody>
</table>
### Major Oil Storage Facility (MOSF) License (Utilities)

<table>
<thead>
<tr>
<th>Tank #004, Capacity 665,000 gallons, ULSD; Tank #005, Capacity 500 gallons, ULSD; Tank #008, Capacity 60 gallons, Used Oil; Tank #009, Capacity 120 gallons, Used Oil; Tank #011, Capacity 200 gallons, Used Oil; Tank #EDG1, Capacity 1,750 gallons, ULSD; Tank #EDG2, Capacity 1,750 gallons, ULSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Built</td>
</tr>
<tr>
<td>Inspection</td>
</tr>
<tr>
<td>Maintenance personnel, EHS program specialists</td>
</tr>
<tr>
<td>State MOSF registration of bulk petroleum tanks (&gt;400,000 gallons at facility)</td>
</tr>
<tr>
<td>5 years</td>
</tr>
<tr>
<td>Utilities EP</td>
</tr>
<tr>
<td>External—NYSDEC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual testing of monitoring wells for VOCs and SVOCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual—lab reports directly to NYSDEC.</td>
</tr>
<tr>
<td>Utilities EP</td>
</tr>
<tr>
<td>External—NYSDEC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monthly monitoring of wells for free product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly; retain reports for 5 years; report finding of free product to DEC Spill Hotline within two</td>
</tr>
<tr>
<td>CHP Maintenance Staff</td>
</tr>
<tr>
<td>External—NYSDEC.</td>
</tr>
<tr>
<td>Chemical Bulk Storage</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td><strong>Spill Prevention and Containment Plan (SPC Plan)</strong></td>
</tr>
<tr>
<td><strong>Description of Previous Spills</strong></td>
</tr>
<tr>
<td><strong>Environmental Compliance Report</strong></td>
</tr>
<tr>
<td><strong>Inspection Certification for Secondary Containment</strong></td>
</tr>
<tr>
<td><strong>Updated SPCC Plan necessitated by regulatory change</strong></td>
</tr>
<tr>
<td><strong>Site Assessment for Facility Closure</strong></td>
</tr>
<tr>
<td><strong>Registered chemical storage in the Central Heating Plant, Water Treatment Plant, Steam Condenser Building, Water Filter Plant, CDS Treatment Plant, CVM Waste Management Facility</strong></td>
</tr>
<tr>
<td><strong>Spill Prevention Report Plan</strong></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Activity</th>
<th>Frequency</th>
<th>Responsible Parties</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration of bulk storage tanks</td>
<td>Every two years</td>
<td>Utilities EP, CDS Manager, CVM WMF Manager, EHS Program Specialist</td>
<td>External—NYSDEC</td>
</tr>
<tr>
<td>Maintain Spill Prevention Report (SPR)</td>
<td>Review and update annually</td>
<td>Utilities EP, CDS Manager, CVM WMF Manager, EHS Program Specialist</td>
<td>Internal—SPR</td>
</tr>
<tr>
<td>5 year inspection</td>
<td>5 year integrity inspection certified tech</td>
<td>Utilities EP, CDS Manager, CVM WMF Manager, EHS Program Specialist</td>
<td>Internal—SPR</td>
</tr>
<tr>
<td>Yearly tank inspection</td>
<td>Yearly maintain in SPR</td>
<td>Utilities EP, CDS Manager, CVM WMF Manager, EHS Program Specialist</td>
<td>Internal—SPR</td>
</tr>
</tbody>
</table>