City of Chicago’s Storage Tank Program and New UST Regulation Update

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Underground Storage Tanks (USTs)

An underground storage tank (UST) is a tank and underground piping connected to the tank that has at least 10 percent of its combined volume underground storing petroleum or certain hazardous substances.

- One-third of all USTs/ASTs within the state are located in Chicago
- 4759 leaking USTs have been reported in the city
- 797 sites still require cleanup
Underground Storage Tanks (cont’d)

Leaking tanks can result in:

- Fire/explosions
- Contaminated soil and groundwater
- Contaminated drinking water, streams, rivers and lakes

Release sources

- Bottom of USTs
- Associated piping
- UST fill manholes
- Dispensing pumps
Storage Tank Program

General responsibilities
• Office management
• Inspection
• Enforcement
Office Management & AST/UST Permitting
Office Management Responsibilities

Scheduling: All UST permitted activities are scheduled on the contractor’s portal. No permitted and scheduled activity can be performed outside the schedule unless changes have been approved in advance by CDPH.

Database management
• 16,000 old UST files
• 9,000 new files

FOIA

CDPH Environmental Permitting & Inspection Portal:
• CDPHFOIA@cityofchicago.org
  OSFM – FOIA - Portal

Outreach program & Training
Permitted Inspections: UST Installation

UST/piping types
• Fiberglass
• Steel with a protective coating

Testing
• Prior installation
• Prior backfilling
• Post installation

OSHA requirements for excavation:
• Tank bedding and backfill material must consist of homogenous pea gravel, crushed stone or clean sand
• Factors: Size of the tank, number of tanks, location of nearby structures, groundwater and traffic loads.
Permitted Inspections: UST Installation

Setting
- Must use a crane with sufficient lifting power to lift and set the tanks
- Tanks should be leveled and straight
- Tanks should be properly anchored to a dead man or hold-down pad

Backfill the excavation
- Homogenous backfill should be deposited carefully around the tank up to top of the tank

Final Inspection: Ensure each piece of equipment from fill port to nozzle is properly installed and tested
Additional Permitted Inspections

Other types of inspections:

• AST/UST removal
• Abandonment-in-place
• Upgrade, repair including flex connector replacement
• Interior Lining
• Lining inspection
• Emergency repairs
• Repair or install cathodic or corrosion protection
• Upgrade or removal of leak detection, spill containment, overfill prevention
Non-Permitted Inspections
Certification Audits

This program is designated to ensure the integrity of UST system. If the facility passes the audit and is found in compliance, a green decal is issued and the new green decal will be valid for two years.

In the event a facility is found to be non-compliant, inspectors will issue a notice of violation (NOV) to all non-compliant tanks, and the facility must bring in full compliance with the violations cited by the CDPH inspector within 60 days. If the non-compliance exceeded the allowed 60 day then a red tag is placed at the fill pipe on some or all of the USTs.

Once a red tag is applied, any remaining fuel in the UST may be dispensed; however, no fuel should be deposited into the USTs. Ordering or depositing fuel in a UST with red tag on it can result in a fine for as much as $10,000 per day to the owner/operator.

Once the facility has achieved full compliance with violation cited; then the owner/operator should contact our office to set up an appointment for red tag removal.
Non-Permitted Inspections

Service Station Surficial Cleansing

The purpose of service station surficial cleansing inspection is to prevent contamination buildup and to maintain an acceptable visual appearance of the service station. To comply with the ordinance, owner/operator of these facilities must perform the following:

• Contain and immediately clean up a spill or overfill from a UST system
• Dispose of waste generated by the cleanup in accordance with applicable federal, state, and local laws and regulations
• Report a spill or overfill that exceeds 25 gallons or causes a sheen on nearby surface water to IEMA within 24 hours
• At least twice per calendar year, and more frequently if needed, wash or cleanse the surficial areas of the service station
Non-Permitted Inspections

LUST Investigation

• Investigation starts with phone calls or complaints from residents regarding fumes or gasoline odors in someone’s basements, sewer or utility lines.
• Responding inspectors based on our UST database information and site information assess the potential radius of source and based on the LEL readings throughout the area of concern establish the location and movement of fumes.
• If the site is a gas station, the inspector looks for any indication of UST release in the Veeder-Root. Next, the inspector will check monitoring wells, submersible containment sumps and dispenser sumps. Finally, the inspector will review all the records of the UST system such as Tank tightness test, line test, ATG and other relevant information within the site investigation.
• Once the inspector has established a suspect release, they should request the tank owner/operator hire a contractor or environmental consulting company to mitigate the release.
• If subsurface is needed, CDPH issues an administrative order to the owner/operator to conduct a subsurface investigation to determine the extent of soil/groundwater contamination, source and pathway into the City Right-of-Way. Additionally, the tank owner/operator should report the release to IEMA.
Other Programs

Highway Authority Agreement (HAA)

HAAs are issued upon request from applicant as an institutional control pursuant to obtaining a NFR letter from IEPA in case where contamination is known or suspected to have migrated off-site under rights-of-way held in trust by the City.

Groundwater Ordinance

The City of Chicago prohibits the installation of new potable water supply wells within the City. The City of Chicago and the Illinois EPA have memorandum of understanding which acknowledges the City’s groundwater ordinance as an acceptable “institutional control” under the state’s Tiered Approach to Corrective Actions Objectives (TACO) guidelines, limiting the need for groundwater remediation.
Abandoned Service Stations (ABSS) are often a source of urban blight in Chicago’s neighborhoods. Some of the many problems found at the ABSS include:

- Leaking underground storage tanks
- Abandoned drums
- Containers with waste oils
- Dangerous buildings
- Abandoned vehicles and tires
- Open monitoring wells
- Illegal dumping of solid or hazardous waste

The purpose of the ABSS management program is to identify these sites throughout the City, perform inspections and seek compliance through either voluntary means or enforcement.
Abandoned Service Stations

If an owner is unwilling to bring a site into compliance, the City has developed a procedure that allows for the abatement of the nuisances associated with the site by demolishing the building, removing any tanks and securing the site.

After abatement, the City may seek cost recovery either through litigation or the assignment of a foreclosable lien to the property.

Residents of Chicago benefit from this program through the elimination of the blight associated with the ABSS and potential redevelopment.
ABSS Redevelopment

The goal of the ABSS program is to return sites to productive use.
Abandoned Service Stations
Removal and Clean-ups

The City’s ABSS management program, also assists in City redevelopment projects by assessing and cleaning up sites impacted by historic UST activities.

Program components
• Environmental Site Assessment Phase I
• Environmental Site Assessment Phase II
• UST removals
• Site clean-up
• NFR
• Site closure
Dangerous Underground Storage Tanks
# New UST Regulation Update

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<td>Flow restrictors in vent lines may no longer be used to meet the overfill prevention requirement at new installations and when an existing flow restrictor is replaced</td>
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<td>Testing following a repair</td>
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<td>Closure of internally lined tanks that fail the internal lining inspection and cannot be repaired according to a code of practice</td>
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<td>Notification of ownership changes</td>
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<td>Demonstrating compatibility</td>
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<td>For airport hydrant fuel distribution systems and UST systems with field-constructed tanks:</td>
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<td>• Notification and financial responsibility¹</td>
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<td>• Release reporting</td>
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<td>• Closure</td>
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<td>Secondary containment and interstitial monitoring for new and replaced tanks and piping</td>
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<td>Under-dispenser containment for new dispenser systems</td>
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<td>Operator training</td>
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<td>Site assessment records for groundwater and vapor monitoring</td>
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<td>For previously deferred UST systems:²</td>
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<td>• Release detection for UST systems that store fuel solely for use by emergency power generators</td>
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<tr>
<td>• Subpart K (except notification, financial responsibility, release reporting, and closure) for airport hydrant fuel distribution systems and UST systems with field-constructed tanks</td>
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<tr>
<td>Spill prevention equipment testing ²</td>
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<td>Containment sump testing for sumps used for piping interstitial monitoring ²</td>
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¹Note that EPA is requiring owners and operators to also submit a one-time notification of existence for these UST systems by October 13, 2018. Owners and operators must demonstrate financial responsibility when they submit the one-time notification form.

²UST systems installed after October 13, 2015 must meet these requirements at installation.
New UST Regulation Update: Ball Float Vent Valve Prohibition

“Flow restrictors used in vent lines may not be used to comply ... with this section when overfill prevention is installed or replaced after 10/13/15.” 280.20(c)(ii)(3).

To avoid having Illinois O/Os in conflict with the federal regulation, CDPH/OSFM has been enforcing this requirement in advance of revising our UST rules, effective 10/13/15. As long as the ball float works, you can keep it. If it fails, it cannot be replaced with a ball float. No new installs will be approved with ball floats.
New UST Regulation Update: Compatibility of UST System with Ethanol and Biodiesel Blends

Owners and operators must notify the OSFM at least 30 days before switching to a regulated substance containing greater than 10% ethanol, 20% biodiesel, or other regulated substance.

Owners and operators must demonstrate compatibility of the UST system through a nationally recognized testing lab listing or manufacturer approval of UST equipment or components, or use an alternative option identified by OSFM that is no less protective than demonstrating compatibility of the UST System.

Owners and operators must maintain records for as long as the biofuel blend is stored to demonstrate compliance.
New Operation and Maintenance Requirements

The owner/operator must conduct annual release detection equipment testing to ensure equipment is operating properly
• Requirement begins October 13, 2018. (This requirement was implemented in Illinois on August 8, 2012).
• Keep records for 3 years

Leak Detection on USTs Supplying Emergency Power Generators is effective 10/13/2018. This has been required for many years in Illinois.
New Operation and Maintenance Requirements

Secondary Containments

Owners & Operators must install secondary containment and interstitial monitoring for all new and replaced tanks and piping (except safe suction piping and piping associated with field constructed tanks greater than 50,000 gallons in size and airport Hydrant system).

- Secondary containment, tanks and piping, has been required in Illinois for all new installation since 2/1/2008.
- Owners & operators must install under-dispenser containment sumps for all new dispenser system.
- Under dispenser containment sumps have been required in Illinois on all new dispenser installations since 5/1/2003.
New Operation and Maintenance Requirements
Periodic Walkthrough Inspections

Every 30 Days
• Check spill prevention equipment
• Check release detection equipment and records

Annually
• Check containment sumps
• Check hand held release detection equipment

Keep records of the walkthrough inspection for one year.
EPA established the following minimum training requirements for designated Class A, Class B, and Class C operators. Operators must be trained by October 13, 2018. After this date, new Class A and Class B operators must be trained within 30 days of assuming duties. Class C Operators must be trained before assuming duties. (this was implemented in Illinois on August 8, 2012).

Recordkeeping is required for as long as the operator is designated at the facility.

Retraining is required for Class A and B operators at facilities determined to be out of compliance.
New Requirements For Field Constructed Tanks And Airport Hydrant

2015 UST regulation removes the deferral that was given in 1988 for Field Constructed tanks (FCTs) and Airport Hydrant Systems (AHSs). Owners and operators may use alternative release detection options for FCT and AHS systems.

- AHS: O’Hare Airport hydrant system: 22,512,000-gallons of Jet Fuel and over 30 miles of piping.
- FCT: at Fisk plant on Cermak: 1.3 million gallons of Jet fuel.

Site assessment required for systems using either vapor monitoring or groundwater monitoring.

FCTs and AHSs must meet the new UST requirements by October 13, 2018:
Questions?
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