

# **DuPage County Environmental, Safety, Health & Property Loss Control Program**

## **Underground Storage Tank (UST) Plan**

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### **Purpose**

The purpose of this program is to provide one source of written documentation for all elements required as underground storage tank (UST) records. In addition, this plan will inform interested persons, including County and contractor employees, about this County's compliance with Environmental Protection Agency (EPA) requirements for USTs under 40 CFR 280, Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks. Also the County will adhere to Illinois Office of the State Fire Marshall rules Title 41 Parts 174, 175 and 176 for UST's and the storage and use of petroleum products.

This plan provides a written description of procedures for meeting the requirements for registration; maintaining records; leak detection; upgrading, replacing, or closing existing USTs; new UST installation; UST maintenance and repair; financial responsibility; and corrective action. Documents relating to these UST requirements are included in appendices.

Our County understands how a UST with leaks, spills, and overfills can threaten people and property. It is our goal to prevent leaks and spills, to find leaks and spills, to correct any problems created by any leaks and spills, and to obtain proper financial resources so that we may pay for correcting the problems created if our USTs leak.

We encourage any suggestions that our employees or our community members have for improving our UST written plan, as we are committed to developing and maintaining an effective plan. We strive for clear understanding, safe and environmentally-conscientious behavior, and involvement in the plan from every level of the County.

### **Location of Plan**

A copy of our UST written plan may be reviewed by employees. It is located on the Intranet under Risk Management-Environmental Heading. Employees without computer access can obtain the plan by contacting their supervisor.

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### Administrative Duties

The Risk Management Unit is responsible for maintaining the written UST plan; for ensuring that our written plan is complete, kept up to date, and made available to applicable or required authorities. Is also responsible for Documentation of all financial assurance mechanisms used to demonstrate financial responsibility for each UST until either the system has been properly closed, or if corrective action is required, then until corrective action is completed and the tank is properly closed.

Director of Facilities and Highway for respective campus tanks and Director of Public Works for off campus tanks are considered the operators of their respective underground tanks. These Directors are responsible for UST requirements and record management for their respective tanks.

### **The following records are required to be kept for the life of the tank unless otherwise noted:**

- Proof of Financial Responsibility (Insurance policies).
- Leak detection performance and maintenance records, including:
  - Monitoring results and the tightness tests.
  - Copies of performance claims provided by leak detection manufacturers for USTs installed in the last five years and the manner in which these claims have been justified or tested by the equipment manufacturer or installer.
  - Records of maintenance, repair, and calibration of on-site leak detection equipment.
  - Calibration and maintenance provided by the equipment manufacturer for USTs and any other records that demonstrate compliance with release detection requirements.

### **Required inspections and tests of our corrosion protection systems, including:**

- All Documentation of operation and testing of corrosion protection equipment. (can be done by staff recording rectifier output and compare to the recommended range provided by installer of system
- Tank and Piping precision test results to be kept for 2 years or at least until the next precision test whichever is longer.
- Annual survey's must be conducted of impressed cathodic protection systems by a Certified CP tester either by the National Association of Corrosion Engineers (NACE) or supervised by a NACE cathodic protection specialist.
- All State Fire Marshall Inspections.
- When needed records showing that each repaired UST system was properly repaired. These are kept for the life of each UST system.
- When appropriate records showing that each upgraded UST system was done properly and kept for the life of each UST system.
- Site assessment results conducted at permanent closure or change-in-service of USTs which were closed or changed in service. These results show the impact that each closed or changed-in-service UST has had on the surrounding area.
- Any other record required by the State of Illinois.

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### **Records: Are to be Maintained for:**

Each of our installed USTs is registered with State Fire Marshall's Office.

<b>UST:</b>	<b>Date of installation:</b>
Power Plant 4-1	1986
Power Plant 4-2	1986
Power Plant 4-3	1986
Transportation Dept 4	1980
Transportation Dept 5	1980
Transportation Dept 6	1986
Jail 8	1992
JOF 9	1991
Woodridge 11	1983
Woodridge 12	1983
Woodridge 13	1983
Knoll wood 14	1987
Knoll wood 15	1987

For new any new USTs, we will certify that we have met the requirements for installation of tanks and piping, cathodic protection of steel tanks, and release detection. Our installer will be required to be certified that the methods used to install the new tank(s) and piping meet Illinois and Federal EPA requirements.

Public Works and Facilities Departments are responsible for reporting to Illinois EPA all releases from any of their tanks, including suspected releases, spills and over fills, and confirmed releases. If we ever have a release, they are responsible for reporting to Illinois EPA all corrective actions planned or taken, including initial abatement measures, initial site description, how much product was removed, investigation of soil and groundwater cleanup, and a plan on preventing similar incidents.

Similarly, before permanent closure or change-in-service is required, Public Works / Facilities Departments are responsible for notifying Illinois EPA the permanent closure or change in service.

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### Leak (Release) Detection

The act of leak detection is determining whether a leak of a regulated substance has occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

- All leak detection systems for existing tanks and piping were installed prior to December 1993 with Continuous Statistical Leak Detection (CSDL) hardware, firmware and software to allow for leak analysis in tanks while fills are taking place for all fuel pumps located at Green Valley (Woodridge) 3 tanks and Knollwood's 2 tanks. All of our operating UST systems, including their piping, have leak detection systems which meet all requirements, including:
  1. Our County can detect a leak from any portion of the tank or its piping that routinely contains petroleum.
  2. Our County's leak detection systems are installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions.
  3. Our County's leak detection systems meet performance requirements described in the federal regulations (40 CFR 280.43 and 280.44).

When identifying the best leak detection system for our UST(s), we considered cost, facility configuration (such as complexity of piping runs and manifold tanks), groundwater depth, soil type, seasonal rainfall and temperature ranges, availability of experienced installers, and other variables.

### The following leak detection method(s) were chosen by our County:

- Automatic Tank Gauges with print outs weekly.
- Monthly perform a dip test and entered results in "Inventory book" along with the reading from the ATG for comparison.
- Annual Cathodic protection inspection and testing on all steel tanks by certified contractor.
- Interstitial testing every 3 years for the Jail tank by certified contractor.
- Steel tanks have internal inspections every 5 years by certified contractor.
- Our Piping Leak Detection: none is required as all tanks at the Wheaton Campus have European Safe Suction.
- Piping Leak Detection on tanks in Woodridge and Knollwood have Suction Pump Check Valves.
- Continuous Statistical Leak Detection (CSDL) at Woodridge and Knollwood tanks.

### We have no pressurized piping as of 10-30-12.

We looked for experienced, professional vendors and installers of leak detection. Records of leak detection performance and maintenance are maintained by the respective department responsible for the tank.

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### Closing USTs

Because closing or removing tanks is dangerous work, we will look for qualified professionals to close or remove any of our USTs using recognized State, Federal and County safety practices at the time of removal.

We will meet the following requirements for closure:

- Notify the regulatory authority at least 30 days before we close a UST.
- Determine if contamination from our UST is present in the surrounding environment. If there is contamination, we may have to take corrective action. Note: A record of any actions our County has taken for any permanent closures in the last 3 years to determine if contamination is present at the site is available from the respective department.
- Remove the UST from the ground OR fill it with a harmless, chemically inactive solid, like sand. In either case, we will have trained professionals carefully and safely empty and clean the UST by removing all liquids, dangerous vapor levels, and accumulated sludge.

Records of site assessment results conducted at closure or change-in-service for those USTs closed in the future will be maintained by the respective department forever.

### Spill Protection:

All of our USTs have catchment basins to contain spills. Our basins are large enough to contain what may spill when the delivery hose is uncoupled from the fill pipe.

Because we are required to have a way to remove liquid from catchment basins, our manufacturer(s), have equipped our catchment basins with a hand pump and/or drain to remove liquid.

We try to keep water out of catchment basins by keeping fill pipe cover closed and free of debris, grass cuttings etc around seal. However, if water does collect, we pump out the catchment basin and dispose of the liquid properly. If the liquid contains fuel or chemicals, it could be considered a hazardous waste. If that is the case, we follow all hazardous waste testing and handling requirements.

With the methods our County has chosen for spill and overflow protection and corrosion protection, our UST(s) are less likely to leak, damage the environment, possibly open our County to third-party lawsuits, and leave us with costly cleanups.

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The following USTs have spill protection in the form of a catch basin with hand pump for removal or drain directly back into the tank.

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Power Plant 4-2	1986
Power Plant 4-3	1986
Transportation Dept 4	1980
Transportation Dept 5	1980
Transportation Dept 6	1986
OEM 7	1979
Jail 8	1992
JOF 9	1991
JTK 10	1970
Woodridge 11	1983
Woodridge 12	1983
Woodridge 13	1983
Knoll wood 14	1987
Knoll wood 15	1987

### **Overfill Protection:**

When a tank is overfilled, large volumes could be released at the fill pipe and through any loose fittings on the top of a tank or a loose vent pipe. In order to prevent such overfill problems:

- Both ourselves and our fuel deliverer follow industry standards for correct filling practices. We use the following method to ensure that there is room in the UST(s) for the delivery and the delivery driver watches the delivery at all times:
- Keep tank no more than  $\frac{3}{4}$ 's full this prevents overfilling and expansion.
- There is an audible alarm when tank is beginning to reach full level.

In this way, over fill spills at the fill pipe can be prevented.

Our overfill protection devices are combined with careful filling practices.

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### **Corrosion Protection:**

Because unprotected steel USTs and piping corrode and release product through corrosion holes, corrosion protection methods are required for UST systems.

The following are the corrosion protection method(s) for existing steel tanks and steel piping is:

Impressed cathodic protection.

All of our metal piping is replaced if damaged before adding corrosion protection. We never repair damaged piping before adding corrosion protection.

We looked for experienced, professional vendors and installers of corrosion protection to install the corrosion protection for our USTs.

### **Replacing UST(s)**

Our state requires tanks and piping to be closed and installed by contractors who are certified to do this type of work.

### **Installing New UST(s)**

We will look for qualified, professional vendors and installers to install any new UST's. We will make sure careful installation practices are used and standard industry codes and procedures are followed during excavation, tank system sitting, burial depth, tank system assembly, backfilling around the tank system, and surface grading. We will ensure the installer handles the tank properly during installation, piping runs are properly laid out, joints are completely tightened, cover pads are constructed adequately, and construction accidents which lead to failure of delivery piping are prevented.

Installation requirements of 40 CFR 280.20(d) and (e) are also met. Our County:

- Properly installs all tanks and piping in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and in accordance with manufacturer's instructions; and
  - Certifies on a notification form that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with proper installation.
1. Our new USTs will be properly designed and constructed, protect any portion of the tank that routinely contains product from corrosion, and are constructed of fiberglass-reinforced plastic, catholically-protected steel, steel-fiberglass-reinforced-plastic composite, metal, or material

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determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance.

2. Our piping is properly designed, constructed, and protected from corrosion if it routinely contains regulated substances, and is in contact with the ground. Our piping is constructed of fiberglass-reinforced plastic, cathodically-protected steel, metal, or material determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance.
3. The only new metal tanks or piping that do not have additional corrosion protection are those that are installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life, and have records that demonstrate the corrosion expert's determination. These records are maintained for the remaining life of the tank or piping.

### Maintaining UST(s)

Our County works to prevent releases due to corrosion and operate and maintain corrosion protection system(s) to continuously protect metal components of the tank and piping. All cathodic protection systems are inspected by a qualified cathodic protection tester, at the following frequency:

Annually

**Release of Petroleum Product:** If 25 gallons or more of a product is released in the soil, basements, sewers, surface water, or underground utility lines IEMA must be contacted 1-800-782-7860. In addition 911 must be immediately called when a suspected release may present a hazard to life ( such as vapors in sewers or basements) or a visible sheen is present on a body of water.

### Suspected Release

If a leak is suspected a certified contractor is responsible for conducting tightness testing of the entire UST system and checking the site (this is called site checking) for additional information on the presence and source of contamination. This individual will investigate and confirm in writing all suspected releases within 7 days unless corrective action is initiated.

### Initial Response

If the release is confirmed, then the responsible Director will report the release, take immediate action to prevent any further release, and identify and mitigate fire, explosion, and vapor hazards immediately.



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### Initial Abatement Measures

After initial response, then the responsible Director will take these initial abatement measures:

- Remove petroleum from the UST to prevent further release.
- Visually inspecting any aboveground releases or exposed belowground releases.
- Prevent further migration of the released substance into surrounding soils and groundwater.
- Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the excavation zone, entered into subsurface structures (e.g., sewers or basements).
- Remedy hazards posed by contaminated soils that are excavated or exposed as a result of the following activities: release confirmation, site investigation, abatement, or corrective action.
- If these remedies include treatment or disposal of soils, then comply with applicable state and local requirements.
- Measure for the presence of a release where contamination is most likely unless the presence and source of the release have been confirmed according to the site check or closure site assessment.
- Investigate to determine the possible presence of free product. If free product is present, begin free product removal as soon as practical according to 40 CFR 280.64.
- Submit a report to the IMEA agency within 20 days of the release confirmation, including a summary of the initial abatement measures taken and any resulting information or data.

### Financial Responsibility

Our facility has the financial resources to clean up our site if a release occurs, to correct environmental damage, and compensate third parties for injury to their property or themselves. The amount of coverage can vary. We have chosen the following method of financial coverage in the form of Tank Liability Insurance with an A + rated insurance carrier. The Finance Departments Risk Management unit is responsible for ensuring that insurance premiums are paid on time and in full and copies of insurance policies are kept for the life of the tank.

### Maintaining the Plan

Risk Management is responsible for updating the plan as needed by incorporating any necessary changes resulting from major changes in our facility's operation or maintenance of our Underground Tanks.