



## Installer Guidelines for Installation of Underground Storage Tank Systems in Iowa

These guidelines are applicable for the installation of underground storage tank (UST) systems that will contain petroleum fuels or hazardous substance. These guidelines are prepared to assist the Iowa certified installers and installation inspectors in the process of submitting notification forms to the Iowa DNR UST Section in a timely manner, as well as working with owner/operators to plan, build and operate their system according to State regulations. Please save the UST Section webpage ([iowadnr.gov/ust](http://iowadnr.gov/ust)) and the DNR Tanks database ([programs.iowadnr.gov/tanks](http://programs.iowadnr.gov/tanks)).

### **PLANNING STAGE**

Review all the forms involved with UST installation with the UST owner/operators. Let them know what is required by rule ([Iowa Administrative Code \(IAC\) 567—Chapter 135](#)) and remind them of the resources available on the DNR website. This is also a good time to remind owners/operators of the requirements associated with record-keeping and reporting as listed in rule.

If the proposed UST or piping installation is at a retail facility, as defined in [Iowa Code 214A.1](#), provisions of the [E15 Access Standard](#) may apply. Owners may be subject to the requirements in [Iowa Code 455G.32](#) and [Iowa Code 455G.33](#), which provides that:

- All gasoline storage and dispensing infrastructure installed, replaced or converted for the purpose of storing and dispensing ethanol blended gasoline classified as E-15 or higher must be compatible with ethanol blended gasoline classified as E-85.
- All diesel fuel storage and dispensing infrastructure installed, replaced or converted must be compatible with a biodiesel blended fuel classified as B-20 or higher.

Owners need to be cognizant of the E15 dispensing requirements that may apply to their facility. For information on the [E15 Access standard](#), contact the Iowa Department of Agriculture and Land Stewardship.

### *Tanks, Piping and other Equipment*

All tanks, piping, and equipment shall be installed and tested in accordance with the [Chapter 135](#) and manufacturer's recommendations/guidelines.

### *Under Dispenser Containments (UDC)*

When installing a new or replacing a motor fuel dispenser, UDC shall be installed whenever any of the following occurs:

- A motor fuel dispenser is installed at a location where there previously was no dispenser; or
- An existing motor fuel dispenser is removed and replaced with another dispenser. UDC is not required when only the emergency shutoff, shear valves or check valves are replaced.

UDC shall be installed beneath the dispenser whenever ten feet or more of piping is repaired or replaced within ten feet of a dispenser.

### **PRE-INSTALLATION NOTIFICATIONS**

The UST owner/operator and the UST Installer must complete the [Notice of Intent to Install \(NOI\) Form \(DNR Form 542-0104\)](#) and submit it to the UST Section at [ustoperations@dnr.iowa.gov](mailto:ustoperations@dnr.iowa.gov) 30 days prior to installation [[135.3\(3\)c](#)]. Forms may also be mailed to the address on page 1, or faxed to 515-725-8201. Owners should include the anticipated UST facility opening date on the paperwork.

Installers are encouraged to use the [UST Installation Paperwork Checklist \(Form 542-0075\)](#) for tracking their document submissions. This is an optional form and should NOT be submitted to the Department. Always use the [UST Forms webpage](#) for the most current forms.

#### *Contact Local Authorities*

The installer must contact the local authorities for any additional requirements or permitting that may apply. Installers are responsible to ensure a safe workplace and the protection of the environment during the performance of their work.

If installing UST systems in Polk and Linn Counties, the installer must contact the County office to find out more about Air Quality requirements:

Air Quality Division Linn County Public Health Department 1020 6 <sup>th</sup> St SE Cedar Rapids, IA 52401 Phone: (319) 892-6000; Fax: (319) 892-6099 <a href="mailto:compliancereporting-air@linncountyiowa.gov">compliancereporting-air@linncountyiowa.gov</a>	Air Quality Division Polk County Public Works 5885 NE 14 <sup>th</sup> St Des Moines, IA 50313 Phone: (515) 286-3705; Fax: (515) 286-3437 <a href="mailto:airquality@polkcountyiowa.gov">airquality@polkcountyiowa.gov</a>
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#### *Ballast and Testing with Regulated Substance*

Under no circumstance shall a regulated substance be placed into an unregistered UST without the express approval of the Department. Requests to store a regulated substance in an unregistered tank may be submitted to the UST Section. Requests for fuel for ballasting or testing should be made by submission of the DNR Fuel Authorization Request form to [ustoperations@dnr.iowa.gov](mailto:ustoperations@dnr.iowa.gov). Failure to obtain authorization may result legal action against the owner, installer, and fuel company that provides the fuel delivery.

Interstitial monitoring (sensor/vacuum/pressure) is required as soon as the regulated substance is transferred to the tank. Financial responsibility (liability insurance) must be in place and tank tags issued before the UST system can receive additional deliveries.

#### *Note on Diesel Exhaust Fluid (DEF) Tanks*

While DEF is not a regulated substance, the DNR recommends treating it as such. If a DEF tank is installed, the DNR asks that a registration form be properly completed, and a \$10 registration fee be paid.

#### **INSTALLATION PROCESS**

The UST system must be properly installed in accordance with the [Chapter 135](#) and manufacturer's recommendations/guidelines.

#### *Inspections required*

The Iowa licensed Installation Inspector must complete the [Installation Inspector Checklist \(DNR Form 542-0069\)](#) to document the completed inspections.

Inspections are required when concrete is cut or excavation is required that could affect the integrity or operation of the UST system or when a component that routinely contains product is installed, replaced or repaired. Inspections must occur when the component is uncovered and replaced or repaired and during testing when required (i.e., piping replacement or repair) but before operation recommences.

For a new or replaced UST or piping project, 3 inspections are required. These typically occur as follows:

- 1<sup>st</sup> Inspection - Prior to placement of the tanks or piping.
- 2<sup>nd</sup> Inspection - Prior to covering of tank or piping, when all tanks and piping are exposed.
- 3<sup>rd</sup> Inspection - Performed when all components are operational and the system has been covered, but before actual operation.

For an existing UST system, whenever secondary containment (such as sumps or UDC) is installed, at least one

inspection is required after the equipment is installed and before the system is backfilled.

#### *Inspection Not Required*

Inspections are not required when an owner or contractor is replacing, repairing or installing any of the following items: drop tubes, overfill devices, spill buckets, installation of ATG systems, dispensers, submersible turbine pumps, automatic line leak detectors, internal lining and periodic inspections or lining repair, cathodic protection systems, interstitial sensors, or flex connectors.

#### *Final Precision Testing*

All tanks, piping and equipment shall be installed and tested in accordance with manufacturers' recommendations and guidelines. Testing includes: Passing tank tightness test (0.1 gph) using ATG system, vacuum, pressure, or liquid interstitial monitoring, functional tests of UST system monitoring equipment must be completed prior to placing UST system into operation. This includes establishing the monthly monitoring and leak detection protocol to comply with [135.5 \(Release Detection\)](#).

#### **SUBMISSION OF INSTALLATION DOCUMENTS**

For registration numbers of existing sites use the DNR tanks database at [programs.iowadnr.gov/tanks](http://programs.iowadnr.gov/tanks). Installation documents may be emailed or mailed to the addresses on page one.

The Installation Inspector is required to submit the completed [Installation Inspection Checklist \(DNR Form 542- 0069\)](#) within 14 days of the final installation inspection. This form may be submitted electronically.

The Installer is required to submit supporting documentation for the completed installation, to include but not necessarily limited to, the following:

- Passing tank and line precision test results
- Copy of ATG printout showing functionality of each interstitial sensors or manual monitoring log
- Vapor Emissions Control or Stage 1 Vapor Recovery Survey Form (DNR Form 542-0016) and associated testing results
- [Secondary Containment Testing Report Form \(DNR Form 542-0153\)](#)
- [UST System Checklist for Equipment Compatibility \(DNR Form 542-1336\)](#)
- Copy of the final As-built Dimensioned Site Diagram. Diagram must show the location and capacity of each tank; identify the liquids to be stored; identify the location of fills, product lines, vent pipes, and each UDC in relation to the site structures and adjoining roads.

The UST owner or operator is required to submit (mail, email or fax) the signed [UST Registration Form # 148 \(DNR Form 542-3266\)](#) with the payment of applicable fees. The registration form is due within 30 days after the final installation inspection.

Installers should assist the owner/operator as much as possible with completing all the forms to ensure they are complete, accurate and submitted on time. Continuous communication with the UST Section and the owner's insurance provider is extremely important and should prevent last minute delays during the review process.

For existing UST sites, documentation must be provided to show that any new UST system is insured by the owner's financial responsibility mechanism.

#### **DNR UST FORMS**

Always use the [UST Forms webpage](#) for the most current forms. Installers can use the [UST Installation Paperwork Checklist \(DNR Form 542-0075\)](#) for tracking their document submissions. The installation guidelines and the [Documentation Requirements for UST Systems and Components](#) (matrix of paperwork requirements) are also on our UST Forms webpage.

Final approval and tank tags must come from the UST section before the system is allowed to receive fuel. Please **allow 10 business days** for processing once all paperwork is submitted to the Iowa DNR UST Section.

You have **30 days** to submit the forms after the final 3<sup>rd</sup> Party Installation Inspection. There is an additional \$250 fee for failing to register a tank within the 30 days after installation is complete.

#### *Forms That May Be Needed*

- [Notification of Intent to Install \(DNR Form 542-0104\)](#)
- [UST Registration Form # 148 \(DNR Form 542-3266\)](#) prior to the original being mailed
- [Installer Inspection Checklist \(DNR Form 542-0069\)](#) completed by the Installation Inspector
- [UST System Checklist for Equipment Compatibility \(DNR Form 542-1336\)](#)
- Stage 1 Vapor Recovery Survey Form (DNR Form 542-0016)
- [Secondary Containment Testing Report Form \(DNR Form 542-0153\)](#)

#### **RESOURCES**

Resources are located at [iowadnr.gov/ust](http://iowadnr.gov/ust).

- [UST Forms](#)
- [UST Installation Requirements](#)
- [Iowa UST Owner/Operator Requirements](#)

Email all installation documents and testing to the UST Section at [ustoperations@dnr.iowa.gov](mailto:ustoperations@dnr.iowa.gov) or mail to the UST Section using the address on page 1 of this document.

Contact the UST Section via phone at 515-725-8200 and via fax at 515-725-8201. NESHAP Questions can be directed to Sarah Mousel, DNR Air Quality Bureau, at 515-418-7304 and [sarah.mousel@dnr.iowa.gov](mailto:sarah.mousel@dnr.iowa.gov). For more state and federal contacts, please use the [UST Section Staff Contact Information and Other Resources](#) sheet.