

Underground Storage Tank Removal Program

Time: Health and Physical Hazards of UST Removal-2 hours

UST Regulations-2 hours

Underground Storage Tank Removal-12 hours

Maximum Class Size: 10-classroom activities

5-hand-on activities

Prerequisites: None

Course Description: This 8-hour LIUNA Training and Education course prepares participants to identify and demonstrate precautions that should be taken to secure an Underground Storage Tank (UST) area of potential hazards. It also covers the requirements for locking out electrical sources as well as actions to be taken when petroleum vapors are detected in confined spaces greater than the LEL or PEL. This course utilizes both classroom instruction and hands-on training.

Goals/Objectives/Student Learning Outcomes:

- Define the following terms: Aromatic hydrocarbon, delayed effect, dose, health hazard, hypothermia, ingestion, inhalation, oxygen-deficient atmosphere
- List four ingredients in fuel that are considered health hazards
- Describe the precautions that should be taken when working with petroleum products
- Describe the three sources that can create a toxic atmosphere in an underground storage tank
- Define the following terms: Cathodic protection, Hydrocarbon, Regulated Substance, Release
- Describe the components of an underground storage tank (UST).
- List four reasons why UST regulations have been developed
- List four reasons why UST leak
- Describe two methods to prevent steel tanks from leaking
- List four ways a petroleum release can contaminate the environment
- Describe and demonstrate the immediate precautions that should be taken to secure an area of potential fire and explosion hazards
- Describe and demonstrate the requirements for locking out electrical sources

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- Describe and demonstrate the actions to take when petroleum vapors are detected in confined spaces at concentrations greater than the LEL or PEL
- List three guidelines for effective ventilation; given an underground storage tank with a mock description of its contents and ventilation equipment, demonstrate appropriate setup of ventilation equipment based on the hazards present
- Define the following terms: bonding, grounding, inerting, purging, tank cleaning
- Given the proper tools and materials, demonstrate bonding/grounding of a UST
- List two common gases used to inert a UST and explain the reason for using each
- List two methods of purging a UST; demonstrate at least one method
- List two methods of cleaning a UST; demonstrate at least one method
- Explain when disposal in place is preferable to tank removal

Standards Addressed

OSHA Permit-Required Confined Space Standard 29 CFR 1910.146.

Classroom Rules and Procedures

- All classes begin at 6:30 am and end at 3:00 pm
- Upon entering classroom, all participants must sign in and be seated by 6:30 am
- Class will consist of a combination of lecture, video, demonstration, coached group exercises, individual exercises and assessment.
- Students are required to report to class ready to work and maintain the provided PPE

Textbooks/Readings/Materials

- *LIUNA Health & Physical Hazards of UST Removal IG/PT*
- *LIUNA UST Regulations IG/PG*
- *LIUNA Underground Storage Tank Removal IG/PG*
- *UST Regulations Power Point*
- *UST Health Power Point*
- *UST Removal Power Point*
- *Video: Underground Storage Tanks: Safe Removal*
- *LIUNA Underground Storage Tank Worker Exam*

Tools/Equipment/Other Materials

- tape measures
- pipe wrenches
- adjustable wrenches
- shovels

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- rope
- caution tape, danger tape
- hazard signs
- lock out, tag out devices/tags
- ventilation equipment-blowers, hoses, etc.
- water hoses
- grounding cables
- grounding rod
- airlines
- water supply
- fuel and oil for equipment
- rigging equipment
- pipe for purging
- nitrogen tanks and lines for inerting
- backhoe
- air compressor with hoses, whip-lines, and safety pins
- pressure washer with all attachments

Personal Protective Equipment

- 10 pairs of gloves
- 10 pairs of safety glasses
- 20 pairs of earplugs
- 10 hard hats

Course Requirements

To receive credit for the course, participants must:

- Be present for the entire class
- Participate in all classroom exercises
- Pass a written exam
- Pass a hands-on assessment

Course Policies

- Participants must be on-time and ready to work.
- Participants must return from breaks on-time.
- Participants must participate in each exercise and assignment

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- Participants who are on “light duty” are not allowed to take this course due to the physically demanding requirements.

Assessment and Grading

Participants will be assessed on the following:

- All written exams must be passed with a score of 80% or above.
- All hands-on exercises are graded on performance and participation. They are pass/fail and must be passed with a score of 80% or above.

Safety

Failure to maintain and use PPE may result in dismissal from the course.