

Refinery Excavation and AQMD 1166 Awareness Syllabus

Time: 40 hours

Maximum Class Size: 12

Prerequisite: None

Course Description :

This 40-hour course addresses both OSHA and Cal/OSHA standards for working in and around excavations. Participants will learn to identify the tools, materials, components and requirements for this scope of work as well as the hazards involved. In addition, participants will learn the responsibilities of the Competent Person, how to determine soil types, how to install hydraulic shoring and barricading requirements for excavations. Participants will also learn AQMD 1166 rules and requirements for handling, testing, and logging of contaminated soils.

Goals/Objectives/Student Learning Outcomes

- Define the following items
 - Competent person
 - Excavation
 - Benching
 - Sloping
 - Shoring.
- Describe three signs of a possible cave-in.
- Describe two types of trench protective systems.
- Describe the soil characteristics of Type A, B and C.
- State the sloping requirements for type A, B and C soil.
- List OSHA requirements for access and egress in an excavation.
- Describe safe ways of installing shoring
- Install and remove hydraulic shoring and trench protection systems.
- Describe how to test and classify soil properly .
- Inspect and complete a trench inspection form.
- Describe the protocol and requirements for USA Dig Alert.
- Describe the purpose of AQMD 1166 Soil Mitigation rule.
- Properly monitor and log contaminated soils.
- Describe AQMD guidelines for notifying when contaminated soils are found.
- Describe how to properly store contaminated soil as per AQMD 1166 rule.

Refinery Excavation and AQMD 1166 Awareness Syllabus

- Recognize the characteristics of a confined space and the specific hazards associated with it.
- Describe when Cal/OSHA notification is required regarding excavations over 5 feet.
- Identify barricading procedures for excavations.

Standards

This 40 Refinery Excavation and AQMD 1166 course addresses the following OSHA and AQMD 1166 rules:

OSHA 21926 Subpart P App 91926 Subpart P App CFR 1926 Subpart P

- 1926.650 Excavation: Scope, application and definitions
- 1926.651 Specific excavation requirements
- 1926.652 Requirements for protective systems
- 1926 Subpart P App A soil classification
- 1926 Subpart P App B sloping and benching
- 1926 Subpart P App D Aluminum Hydraulic shoring
- 1926 Subpart P App F selection of protective systems

SCAQMD Rule 1166 Contaminated Soil Mitigation Plan

Classroom Rules and Procedures:

- All classes begin at 6:30 a.m. and end at 3:00 p.m.
- Upon entering the classroom, all participants must sign in and be seated by 6:30 a.m.
- No cell phones in class.
- No food allowed in classroom.
- Class will consist of a combination of lecture, video, demonstration, coached group exercises, individual exercises and assessments.
- Students are required to report to class ready to work and maintain the provided PPE.

Textbooks, Reading and Other Material:

- Flip Chart
- Markers
- LIUNA *Trench and Excavation Safety*
- Excavation and Trenching Safety Video

Refinery Excavation and AQMD 1166 Awareness Syllabus

- LIUNA *Utility Locating Programs*
- Dig Alert Video
- Dig Alert pamphlet
- SCAQMD 1166 Mitigation Plan
- Barricade Safety Video
- Fall through the article
- Efficiency Hydraulic Video
- Vertical Shores Tabulated Data
- OSHA 341 Permit Requirements

Tools/ Equipment/ other Material:

- Aluminum Hydraulic shores
- Shoring Plywood
- OVA monitor
- Pocket Penetrometer
- Trench diggers
- Ramming compactors
- Air compressor
- Visqueen plastic sheeting
- Skid steer

Personal Protective Equipment

- 12 pair of gloves
- 12 pair of safety glasses
- 6 face shields
- 20 pair of ear plugs
- 12 hard hats
- 6 pairs Metatarsal Guards

Course Requirements:

In order to receive credit for the course, participants must:

- Be present for a full 40 hours
- Participate in all classroom exercises
- Pass a written exam
- Pass a hands-on exam

Course Policies:

- Participants must be on time and ready to work.

Refinery Excavation and AQMD 1166 Awareness Syllabus

- Participants must return from breaks on time.
- Participants must participate in each exercise and assignment.
- Participants who are on light duty are not allowed to take this course due 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.
- Failure to follow the OSHA guidelines taught in class will result in dismissal.