

Basic Clay Pipe Awareness Syllabus

Time: 8 hours

Maximum Class Size: 12

Prerequisites: None

Course Description: Vitrified Clay Pipe (VCP) is an environmentally responsible material used in wastewater systems. It is made of entirely natural materials (clay and water) and is used to dispose of wastewater in sewage and drainage systems. VCP offers the longest service life available, corrosion resistance, exceptional leak-tightness, and exceptional durability. Laborers and Apprentices are called upon to work in this industry and this 8-hour course provides a basic awareness for this scope of work.

Goals/Objectives/Student Learning Outcomes:

At the end of the 8-hour Basic Clay Pipe Awareness course, the participant will be able to:

1. Describe basic clay pipe design and how it's made
2. Describe at least 2 - 3 reasons clay pipe is used over other types of pipe
3. Describe 5 - 7 terms found in ASTM C896
4. List 5 – 7 tools commonly used for installation of clay pipe
5. Demonstrate the ability to cut a piece of clay pipe using a soil cutter
6. Demonstrate the ability to safely rig a section of clay pipe
7. Demonstrate and describe proper haunching using the shovel slice technique
8. Demonstrate and describe proper haunching, using a vibrator
9. Pass a written Exit Exam with at least an 80% or above

Classroom Rules and Procedures

- All classes begin at 6:30 am and end at 3:00 pm

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- 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

- Basic Clay Pipe Awareness Student Handout Packet
 - HO1: What I Know
 - HO2: How It's Made (Video Notes)
 - HO3: Clay Pipe Attributes
 - HO4: Objectives
 - HO5: Graphic Organizer
 - HO6: Terms and Definitions
 - HO7: Green Book Exercise
- Basic Clay Pipe Awareness Exit Exams A & B, Answer Sheet and Keys
- Basic Clay Pipe Awareness Hands-On Evaluation
- IT1: Yesterday's Clay vs. Today's Clay Photograph
- IT2: Why Clay? Photograph
- IT3: Standard Strips
- IT4: Two Types of Bedding Photograph
- Video- *Clay Pipe: How It's Made*
- National Clay Pipe Institute (NCPI) Vitrified Clay Pipe (VCP) Engineering Manual (Chapter 1)
- Poster: Basic Clay Pipe Objectives (HO4)
- ASTM Standards Packet (C700, C301, C425, C896, C12)
- Photo of GREENBOOK Cover
- GREENBOOK Handout Packet

Tools/Equipment/Other Materials

- Computer
- Projector
- Flipchart
- Dry-Erase Markers, Markers, Pens
- Synthetic sling and shackles
- Wire rope choker
- Pipe tongs for 12" clay pipes
- Soil cutter (up to 12")

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- Shovels
- Concrete Vibrator
- Backhoe or Excavator
- Generator (or other power source for vibrator)
- Extension cord
- Keel
- 12" clay pipe (6 pieces)
- ¾" crushed rock for bedding

Personal Protective Equipment

- 12 pairs of gloves
- 12 pairs of safety glasses
- 12 pairs of earplugs
- 12 hard hats

Course Requirements

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

- Be present for full eight 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.
- 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 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.

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Safety

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