



eLearning Certificate Program Title: Corrosion Control Treatment Training

Course 1 Title: Corrosion Control Theory and Treatment Options

Course Learning Objectives:

As a result of this course, participants should be able to:

- Name materials which are sources of lead or copper release
- Explain electrochemical processes that are the source of corrosion
- Interpret Eh/pH (Pourbaix) and solubility diagrams
- Recall physical and water quality factors influencing metal release
- Apply corrosion principles to recognize how metal is released from materials commonly used in distribution systems and premise plumbing
- Identify Corrosion Control Treatment (CCT) options which minimize corrosivity of treated water toward lead, copper, iron, galvanized iron, brass, and leaded solder
- Explain correct usage of corrosion indices
- Outline major aspects of a corrosion control program

Course Description (Long)

Meeting the provision of the Revised Lead and Copper Rule (LCRR) is challenging. Producing water with low corrosivity is an important tool for meeting the water quality provisions of the LCRR. This course sets the stage for performing Corrosion Control Evaluations (CCEs) by explaining key features of corrosion control theory and applying this knowledge to the selection of CCT. The course covers the corrosion behavior of lead, copper, iron, galvanized iron, brass, and leaded solder. This course also describes the two common CCT methods, pH/alkalinity control and corrosion control chemical addition, and how these methods can be used to minimize the release of lead and copper from materials commonly used in distribution systems and premise plumbing.

Course Description (Short)

This course presents an overview of internal corrosion control theory tailored to the needs of water systems. It covers aspects of corrosion control theory that can be used to select and test Corrosion Control Treatment (CCT) that best minimizes the release of lead and copper from distribution system and premise plumbing materials.

Blurb

Demystifying corrosion control - a guide to the basics of internal corrosion control.