Course Description:

This course is designed to teach participants how condenser performance can affect the efficiency of a generating unit. After completing this course, participants should be able to identify energy flows into and out of a condenser and know how these flows are related to the efficiency of the condenser and to unit heat rate. Participants should also be familiar with different methods of determining condenser efficiency, such as by checking parameters and indicators and using condenser performance curves and circulating water pump selection curves. In addition, participants learn how changes in condenser vacuum can affect unit heat rate and operating costs.

Learning Objectives:

• Identify the energy flows that enter and exit a condenser and describe how to determine the amount of energy in each energy flow

• Explain how to calculate the efficiency of a condenser

• Identify parameters and indicators that can be used to check the performance of a condenser

• Explain what condenser performance curves are and how they can be used to check the performance of a condenser

• Describe how circulating water pump selection curves can be used to predict when changes in pump operation will be needed and to check condenser performance

• Describe how an increase in condenser vacuum can affect unit heat rate and operating costs

• Describe how a decrease in condenser vacuum can affect unit heat rate and operating costs