Module 1
VTP-1500 Vertical Furnace System Component Overview/Safety Review

INTRODUCTION:

The SEMITOOL VTP-1500 Vertical Furnace basic setup consists of the following subsystems:

A) Process Chamber (reaction chamber)
B) Wafer Transfer System
C) Exhaust/Pressure Control System
D) Temperature Control System
E) Gas Delivery System
F) Water Flow Control System
G) Interlock System (safety)
H) Computer control System
I) Power Distribution System

The inter-relationship of these systems is represented in the diagram at the end of this module. The types of safety hazards associated with each subsystem are listed in Table 1.

OBJECTIVES:

1) Using an instructor provided list of equipment specifications, the student will be able to interpret and explain the equipment specifications to 80% accuracy.

2) Using simple and complex system block diagrams, the student will be able to describe the interaction of different sub-systems in terms of how their actions/tasks contribute to the over all functionality of the VTP-1500 Vertical Furnace to 90% accuracy.

3) From memory, the student will be able to identify the four classifications of safety hazards associated with working on or around the VTP-1500 Vertical Furnace to 100% accuracy.

4) Given a list of the eight major functional subsystems described in Operations Module 3, the student will be able to identify which of the four classifications of hazards are associated with each of the subsystems and cite at least one example of each to 100% accuracy.

5) Given a safety violation scenario by the instructor, the student will be able to describe what consequences may/will occur due to the safety violation.