WORK PROCESS SCHEDULE

Special Hazards Fire Suppression System Technician

O*NET-SOC Code: 49-2098.00 **RAPIDS Code: 2007**

Description: The Special Hazards Fire Suppression System Technician installs and services fire detection systems utilizing various forms of fire detection including smoke detection, heat detection, and flame detection in combination with selected special hazards agents released by a fire alarm control panel. The technician must be familiar with the various code requirements applicable to fire alarm and clean agent fire suppression systems, and be capable of installing systems in compliance with code requirements, employer policies, end user requirements, system manufacturer requirements, safety requirements and project specifications.

The intent is that a technician goes through the two year apprenticeship, and acquires sufficient knowledge to obtain National Institute for Certification in Engineering Technologies (NICET) Level II in Special Hazards Suppression Systems. Once the individual completes the apprenticeship term and obtains the Level II certification, they are graduated from the program.

On-The-Job Learning: Apprentices will receive training in the various work experiences listed below. The order in which this training is given will be determined by the flow of work on the job and will not necessarily be in the order listed. The times allotted to these various processes are the estimated times which the average apprentice will require to learn each phase of the Special Hazards Fire Suppression System Technician. They are intended only as a guide to indicate the quality of the training being provided and the ability of the apprentice to absorb this training in an average amount of time. The total term of apprenticeship is indicated below.

On-The Job Learning **Approximate Hours**

A. First Period.....900

- Company Policies
- Vehicles, Tools and Equipment
- National Fire Protection Association (NFPA) Standards
- Basic Plans and Specifications
- Basic Wiring

B. Second Period.....900

- Introduction to Safety and Material Safety Data Sheet (MSDS) Sheets
- Basic First Aid
- Principles of Combustion
- Standard Symbols
- Basics of Codes and Standards
- Basic Communication Skills
- Layout Simple Designs

C. Third Period 900

- Materials and Components
- Hazard Analysis
- Detection Methods - Automatic Fire Detectors
- Detector Spacing – Automatic Fire Detectors
- Fundamentals of Fire Extinguishment
- Extinguishing Agents
- Cylinder Handling
- Electrical Code Requirements
- Basic Fire Alarm Systems
- Area, Volume and Weight Calculations

D. Fourth Period 900

- Engineering Drawings and Submittals
- Controls, Alarms and System Supervision
- Special Hazards Systems Inspections
- Business Communications
- System Piping Requirements
- Room Integrity Testing
- Piping Pressurization and Puff Testing
- Visual Inspection of Cylinders
- Final Acceptance Testing
- Interconnections between Fire Alarm Systems and Suppression Systems

Total Hours 3,600

RELATED INSTRUCTION OUTLINE

Special Hazards Fire Suppression System Technician

O*NET-SOC Code: 49-2098.00 **RAPIDS Code: 2007**

The following related training outline identifies subject matter, which must be mastered by the apprentice in order to successfully complete the program**. NOTE: 144 hours of related instruction are required for each apprentice for each year.**

***Required Training: Approximate Hours:**

A. Basic Fire Alarm Systems Course **104**
- Textbook: Fire Alarm Signaling Systems Handbook – NFPA
- Independent study, four hour review course with exam

B. Fire Alarm Layout and Design Course **108**
- Textbook: National Fire Alarm Code – NFPA
- Independent study, eight hour review course with exam

C. Electrical Code Requirements Course **108**
- Textbook: National Electrical Code – NFPA
- Independent study, eight hour review course with exam

D. Building Code Course **104**
- Textbook: International Building Code – ICC
- Independent study, four hour review course with exam

Total Hours 424

***Study Materials**

1. Fire Suppression Systems Association (FSSA) Fire Protection System Inspection Form Guidelines – 2009
2. FSSA Inspection and Test Guide – Second Edition
3. FSSA Requalification Test Guide for Use with Special Hazard System Containers – Second Edition, Oct. 2006
4. FSSA Room Preparation Guide for Clean Agent Fire Extinguishing Systems – First Edition, 2010
5. FSSA Guide for the Application of Electronic Detection and Control for Fire Suppression Systems – Issue Date: Nov. 2008
6. FSSA Guide to Estimating Enclosure Pressure and Pressure Relief Vent Area for Applications Using Clean Agent Fire Extinguishing Systems – First Edition, Apr. 2008
7. FSSA Design Tips – CO_2 Local Application Rate-by-Volume – Issue Date: Aug. 2005
8. FSSA CO_2 Personnel Safety per NFPA 12 2005
9. Federal Motor Carrier Safety Administration
10. Voluntary Code of Practice for Reduction of Emissions of Fire Suppression Agents – March 2002
11. NICET Certification Program