

**Part 1 General****1.1 DEFINITIONS**

- .1 CDL - Control Description Logic.
- .2 For additional acronyms and definitions refer to Section 25 05 01 - EMCS: General Requirements.

**1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures, supplemented and modified by requirements of this Section.
- .2 Submit training proposal complete with hour-by-hour schedule including brief overview of content of each segment to Departmental Representative 30 days prior to anticipated date of beginning of training.
  - .1 List name of trainer, and type of visual and audio aids to be used.
  - .2 Show co-ordinated interface with other EMCS mechanical and electrical training programs.
- .3 Submit reports within one week after completion of Phase 1 training program that training has been satisfactorily completed.

**1.3 QUALITY ASSURANCE**

- .1 Provide bilingual, competent instructors thoroughly familiar with aspects of EMCS installed in facility.
- .2 Departmental Representative reserves right to approve instructors.

**1.4 INSTRUCTIONS**

- .1 Provide instruction to designated personnel in adjustment, operation, maintenance and pertinent safety requirements of EMCS installed.
- .2 Training to be project-specific.

**1.5 TIME FOR TRAINING**

- .1 Number of days of instruction to be as specified in this section (1 day = 8 hours including two 15 minute breaks and excluding lunch time).

**1.6 TRAINING MATERIALS**

- .1 Provide equipment, visual and audio aids, and materials for classroom training.
- .2 Supply manual for each trainee, describing in detail data included in each training program.
  - .1 Review contents of manual in detail to explain aspects of operation and maintenance (O&M).

**1.7 TRAINING PROGRAM**

- .1 To be in 1 phase over 1 month period.
- .2 Phase 1: 2 day program to begin 1 week after acceptance for operators, equipment maintenance personnel and programmers.
  - .1 Provide multiple instructors on pre-arranged schedule. Include at least following:
    - .1 Operator training: provide operating personnel, maintenance personnel and programmers with condensed version of Phase 1 training.
    - .2 Equipment maintenance training: provide personnel with 2 days training within 5 day period in maintenance of EMCS equipment, including general equipment layout, trouble shooting and preventive maintenance of EMCS components, maintenance and calibration of sensors and controls.
    - .3 Programmers: provide personnel with 2 days training within 5 day period in following subjects in approximate percentages of total course shown:

Software and architecture: 10%
Application programs: 15%
Controller programming: 50%
Trouble shooting and debugging:10%
Colour graphic generation: 15%

## 1.8 ADDITIONAL TRAINING

- .1 List courses offered by name, duration and approximate cost per person per week. Note courses recommended for training supervisory personnel.

## 1.9 MONITORING OF TRAINING

- .1 Departmental Representative to monitor training program and may modify schedule and content.

## Part 2 Products

### 2.1 NOT USED

- .1 Not Used.

## Part 3 Execution

### 3.1 NOT USED

- .1 Not Used.

**END OF SECTION**