

Part 1 General

1.1 SUMMARY

- .1 Section Includes.
 - .1 Requirements and procedures for training program, instructors and training materials, for building Energy Monitoring and Control System (EMCS) Work.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit training proposal complete with hour-by-hour schedule including brief overview of content of each segment to Departmental Representative 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.
- .2 Submit reports within one week after completion 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 2 phases over 6 month period.

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- .2 Phase 1: 2 day program to begin before 30 day test period at time mutually agreeable to Contractor, Departmental Representative and PWGSC Commissioning Manager.
 - .1 Train O&M personnel in functional operations and procedures to be employed for system operation.
 - .2 Supplement with on-the-job training during 30 day test period.
 - .3 Include overview of system architecture, communications, operation of computer and peripherals, report generation.
 - .4 Include detailed training on operator interface functions for control of mechanical systems, CDL's for each system, and elementary preventive maintenance.
 - .3 Phase 2: 3 day program to begin 8 weeks 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 3 days training within 1 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.

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