

1.0 GENERAL

1.1 DEFINITIONS

- .1 “Commissioning” means a series of activities including start-up and testing of equipment and systems, and instructing the Minister on operation and maintenance that bring the [Work] [facility] [systems and equipment] to a fully operational state. [Completion of Commissioning is a prerequisite to Substantial Performance of the Work.]
- .2 “Initial Commissioning” means the partial commissioning of the [facility] [systems and equipment] under the specified conditions except as indicated in Final Commissioning. Completion of Initial Commissioning is a prerequisite to Substantial Performance of the Work.
- .3 “Final Commissioning” means the completion of the commissioning of the [facility] [systems and equipment] under the specified conditions once available, and providing a completed installation that meets the operational requirements specified in the Contract Documents. Completion of Final Commissioning is a prerequisite to Total Performance of the Work.

1.2 GENERAL COMMISSIONING REQUIREMENTS

- .1 Perform the following services during Commissioning:
 - .1 Develop a Commissioning plan outlining the activities to be conducted and the schedule for their completion.
 - .2 Provide a qualified supervisor to oversee all work.
 - .3 Comply with standards set out by the certifying association under whose standard services will be provided.
 - .4 Provide access to all equipment and services. Co-operate with the [Minister] [Commissioning Agency] [Trainees].
 - .5 Provide all instrumentation, equipment, and materials required for Commissioning.
 - .6 Undertake all pre-start inspections, preparations, checks, and tests.
 - .7 Advise the Minister in writing, at least [5] days prior to performing the specified operational testing. Perform testing in the presence of the Minister [, and where required, in the presence of the manufacturer’s representative].
 - .8 Conduct operational tests, record results, and note all deficiencies.
 - .9 Diagnose deficiencies, determine causes, and take corrective actions. Document each deficiency, cause, and corrective action taken.
 - .10 Repeat Commissioning activities as required to verify that deficiencies have been corrected.
 - .11 Demonstrate the operation of the [facility] [systems and equipment] to the Minister’s personnel.

- .12 Provide training for the Minister's personnel.
- .13 Complete Commissioning records.

1.3 COMMISSIONING RECORDS

- .1 Provide Commissioning reports including [facility] [systems and equipment] checklists for all commissioning activities.
- .2 Provide equipment checklists to facilitate installation and servicing of equipment. Prepare equipment checklists in a form acceptable to the Minister, and include the following:
 - .1 Name of the company and the personnel performing the inspection, including the date and time.
 - .2 Equipment manufacturer and model number.
 - .3 Equipment capacity.
 - .4 Operating voltage and grounding requirements.
 - .5 Operating amperage.
 - .6 Safety devices.
 - .7 Operating characteristics.
 - .8 Equipment operating fluids and fuel requirements.
 - .9 []
- .3 Complete the checklist for each piece of equipment as it is inspected and checked for proper installation and servicing prior to start-up.
- .4 Provide Commissioning reports in a form acceptable to the Minister, and include the following:
 - .1 Completed equipment checklists.
 - .2 Name, address, and telephone number of the company and the names of the personnel performing the Commissioning, and the date, time, and site conditions during Commissioning.
 - .3 Equipment start-up tests and records performed by the manufacturer and the Contractor.
 - .4 Operational testing and adjusting records.
 - .5 Deficiency records including diagnosis, causes, and corrective actions taken.
 - .6 []

1.4 [CONSTRAINTS]

- .1 Additional separate cycles of commissioning by the Contractor may be necessitated at a later time on equipment and systems where Commissioning is dependent on operational or seasonal conditions.
- .2 Perform Initial and Final Commissioning for the following Work:
 - .1 []

1.5 [TRAININGS]

- .1 Demonstrate start-up, operation, control, adjustment, troubleshooting, servicing, and maintenance of each item of equipment.
- .2 Train the Minister's personnel at the established times and location on all phases of the operation and maintenance.
- .3 Provide all instruction aids.
- .4 The Minister will provide a list of personnel to receive training, and will schedule and coordinate their attendance with the Contractor.

1.6 SUBMITTALS

- .1 Provide the following submittals.
- .2 A Commissioning plan at least [30] days prior to starting the [Initial] [Final] Commissioning.
- .3 Commissioning reports no later than [10] days after the [Initial] [Final] Commissioning is completed.

2.0 PRODUCTS – NOT USED

3.0 EXECUTION – NOT USED

END OF SECTION