

On satisfactory completion of the loop check, all covers, doors and access plates shall be properly secured. All wiring shall be returned to its original configuration and any test jumpers removed.

The CONTRACTOR shall define and submit for approval "Lock-Out" procedures which safeguard the operational integrity of equipment not directly associated with the specific loop, but interlocking with it. Personnel will follow "lock out" instructions once equipment is turned over from Construction and when it is capable of being commissioned.

Technicians qualified for all related disciplines shall be provided by the CONTRACTOR. These shall be capable of operating the test equipment and performing the loop checks and re-calibrations (if necessary) of all components on the control system in preparation for the plant transfer phase. Formal records of all testing shall be compiled on appropriate test forms and witnessed by the ADWEA/ENGINEER representative. This should take the form of a "Functional Test Sheet" which shall be signed by the CONTRACTOR and ADWEA alike.

Two-way communications shall be provided between all parties involved in the loop tests.

Any component found to be faulty or outside design parameters shall be highlighted and brought to ADWEA/ENGINEER attention. Defects shall be logged on a pre agreed "Fault Report" or "Punch List" format and suitably rectified at the earliest by the CONTRACTOR.

All loop checking results shall be properly documented and signed by authorised personnel of ADWEA. This shall be the milestone activity for completion of pre-commissioning activities.

10. COMMISSIONING AND START-UP

All instruments including packaged units shall be installed and all systems and loops fully tested before the plant is commissioned. Standby of instrumentation specialists shall be available. Stores and workshops shall be open for emergency repairs and modifications.

The CONTRACTOR shall assist the representative of package vendors and ADWEA during the Commissioning activities.

11. SITE ACCEPTANCE TEST

Instrumentation work shall only be accepted after the plant is in full commercial operation and all instrumentation systems are working satisfactorily.

The normal acceptance procedure shall include handing over of all records made during the construction period, such as test results, instruction manuals, "as-built" drawings, etc.

CONTRACTOR shall carryout Site Acceptance Test (SAT) for the Control system based on ADWEA/ENGINEER approved procedures. Approval of the SAT reports by ADWEA/ENGINEER completes the milestone activity for SAT.



Client	ADWEA
Project:	STANDARD SPECIFICATIONS FOR WATER WORKS
Title:	SPECIFICATION FOR INSTRUMENTATION & CONTROL SYSTEMS INSTALLATIONS