

4.18 Maintenance Manual

CONTRACTOR shall supply a complete set of maintenance manual covering all instrumentation and control systems.

4.19 Cause & Effect Schedule

Contractor shall submit a complete sets of all pumping station systems, protections and control function in a form of cause and effect schedule.

4.20 I/O Lists

Contractor shall submit a complete sets of input/output signals, digital and analogue which shall be used by the control system showing tag numbers, description, type of signal, rack number, addresses, panel numbers, slot, card, channel ... etc.

4.21 Alarm and Trip List

This list shall show all instruments tag numbers, description and type of indication (Alarm/Trip), set point operation. ON/OFF delay time (if required).

4.22 Screen Display Drawings

These drawing shall show, the format of all the required HMI screens as per contract specification.

The symbols and colours shall be as ADWEA standard and requirement.

4.23 Functional Specification Document

This document shall cover the explanations of all subject related to HMI screens including equipment status, system control, display items, alarming, real time and historical trending, system security, mimics, reports etc.

4.24 Spare Parts Lists

These documents shall cover all spare parts in relation to the instrumentation and the control systems.

4.25 Control Philosophy Documents

These documents shall explain the control/protection and operation philosophy of all main and sub-systems, stating clearly if there are any deviations from the Contract Documents.

The Contractor shall also explain his fall back strategy in case of SCADA Control System failure.



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