**Appendix 9C Control Panel FAT Check List**

**General Information**

|  |  |
| --- | --- |
| PLC Name |  |
| Panel Number |  |
| Plant |  |
| Review Date DD/MM/YY |  |
| Checked by |  |
| Version of the standards to which programming was done |  |
| Version of the UDTs and AOIs to which the programming was done |  |

**Shop Drawing Check List**

| Check | Pass/Fail |
| --- | --- |
| Are the approved shop drawing in the commissioning binder |  |
| Does the IO List match the list in Control narrative |  |
| Does the BOM in the shop drawings match the design drawing |  |
| Was the design drawing in CAD format given to the panel builder to use for the shop drawing |  |

**Panel FAT Procedure**

All DIs are to be shorted at the terminal blocks.

All DOs are to be forced and the signal measured at the terminal blocks.

All AIs are to be checked with a signal generator at 0%, 50% and 100% of scale.

All AOs are to be measured with a multi-meter at 0%, 50% and 100% of scale.

**Panel FAT Check List**

| Check | Pass/Fail |
| --- | --- |
| Compare IO List with list in CN during shop drawing review |  |
| Check BOM matches installed |  |
| Check the Work Area Outlet has the proper labels on it |  |
| Confirm layout matches drawing |  |
| Test functionality of the Panel View if there is one |  |
| Are all wire labels affixed and match the shop drawings |  |
| Do all lamacoid match the shop drawings |  |
| Are all terminal blocks labelled |  |
| Check all breakers for on/off functionality |  |
| Test all lights and switches |  |
| Use high load i.e. heat gun to draw down the UPS |  |
| Do wire pull test |  |
| Check that the wiring colours match the approved shop drawings |  |
| Confirm AC Grounding |  |
| Confirm DC Grounding |  |
| Confirm PLC Grounding |  |
| Confirm Bus Grounding |  |
| Confirm Cabinet Grounding |  |

*The list below is a sample only and needs to be updated to match the appropriate I/O of the project or assignment.*

**Sample I/O Check List**

| Address | Description (New) | Pass / Fail |
| --- | --- | --- |
| I:01/00 | Hydro Power Failure |  |
| I:01/01 | UPS Fault |  |
| I:01/02 | Phase Fail Alarm |  |
| I:01/03 | TVSS Alarm |  |
| I:01/04 | Building Illegal Entry Alarm |  |
| I:01/05 | Building Security System Armed |  |
| I:01/06 | Well 9a Pump Room Fire Alarm Status |  |
| I:01/07 | Generator Room Fire Alarm Status |  |
| I:01/08 | Well 9b Pump Room Fire Alarm Status |  |
| I:01/09 | Well 9a Pump Rm HI/LO Temperature Alarm Status |  |
| I:01/10 | Generator Rm HI/LO Temperature Alarm Status |  |
| I:01/11 | Vestibule HI/LO Temperature Alarm Status |  |
| I:01/12 | Chlorine Rm HI/LO Temperature Alarm Status |  |
| I:01/13 | Well 9b Pump Rm HI/LO Temperature Alarm Status |  |
| I:01/14 | Building Flood Alarm Status |  |
| I:01/15 | Fluoride Containment Area Flood |  |
| I:02/00 | Fluoride Rm Ventilation System - Hi Rate |  |
| I:02/01 | Fluoride Rm HI/LO Temperature Alarm Status |  |
| I:02/02 | Chlorine Gas Alarm |  |
| I:02/03 | Chlorine Gas Detector Fault |  |
| I:02/04 | Network Distribution Enclosure High Temperature |  |
| I:02/05 | Chlorine Room Supply Fan Running Status |  |
| I:02/06 | Chlorine Room Exhaust Fan Running Status |  |
| I:02/07 | Fluoride Room Supply Fan Running Status |  |
| I:02/08 | Fluoride Room Exhaust Fan Running Status |  |
| I:02/09 | Vestibule Supply Fan Running Status |  |
| I:02/10 | Valve Chamber 1 Flood Float switch |  |
| I:02/11 | Valve Chamber 2 Flood Float switch |  |
| I:02/12 | Fluoride Pump 1 Control Mode |  |

| Address | Description (New) | Pass / Fail |
| --- | --- | --- |
| I:14.00 | Well Pump 9b Speed Feedback |  | |
| I:14.01 | Chlorinator 2 Position Feedback |  | |
| I:14.02 | Fluoride Pump 2 Speed Feedback |  | |
| I:14.03 | Fluoride Pump 4 Speed Feedback |  | |
| I:15.00 | Fluoride Weight 1 |  | |
| I:15.01 | Chlorinator 3 Position Feedback {Future} |  | |
| I:15.02 | Chlorine Weight 3 {Future} |  | |
| I:15.03 | Chlorine Weight 4 {Future} |  | |
| I:16.00 | Chlorine Gas Scrubber Exhaust Gas Level |  | |
| I:16.01 | Spare |  | |
| I:16.02 | Spare |  | |
| I:16.03 | Spare |  | |
| I:17.00 | Spare |  | |
| I:17.01 | Spare |  | |
| I:17.02 | Spare |  | |
| I:17.03 | Spare |  | |
| O:18.00 | Well Pump 9a Speed Setpoint |  | |
| O:18.01 | Chlorinator 1 Position Setpoint |  | |
| O:18.02 | Fluoride Pump 1 Speed Setpoint |  | |
| O:18.03 | Fluoride Pump 3 Speed Setpoint |  | |
| O:19.00 | Well Pump 9b Speed Setpoint |  | |
| O:19.01 | Chlorinator 2 Position Setpoint |  | |
| O:19.02 | Fluoride Pump 2 Speed Setpoint |  | |
| O:19.03 | Fluoride Pump 4 Speed Setpoint |  | |
| O:20.00 | Chlorinator 3 Position Setpoint {Future} |  | |
| O:20.01 | Spare |  | |
| O:20.02 | Spare |  | |
| O:20.03 | Spare |  | |
|  |  |  | |

**Deficiencies**

*Insert Appendix 9k – Standard Deficiency Sheet here.*

Hand written notes are not to be replaced with typed notes later nor are these sheets to be removed or replaced in the binder at any time.