|  |
| --- |
| **Electrical - Substation L2** |
| **Inspection and Test Plan - ITP** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SECTION 1 - GENERAL** | | | | | |
| **Client:** | **Asset** | | | **ITP Template No.:** | **Revision:** |
|  |  | | | ZENT-ITP-7039 | A |
| **Project Name:** | **Area** | | | **Prepared By:** | **Prepared Date:** |
|  |  | | | Brendan King | 19/12/2023 |
| **Project Number:** | **Discipline** | **Component** | **Location** | **Approved By:** | **Approved Date:** |
|  | Electrical | ITP - Electrical - Substation L2 |  | Brendan Hile |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **SECTION 2 - CLOSE OUT SIGNATURE (ZENVIRON ONLY)** | | | |
| **Name:** | **Position:** | **Signature:** | **Data:** |
|  |  |  |  |
| **Comments:** | | | |
|  | | | |

|  |  |
| --- | --- |
| **SECTION 3 - LEGEND** | |
| **Term** | **Description** |
| **WITNESS** | Activity is to be witnessed by Zenviron | Advance notification mandatory | Activity can proceed once the minimum notification period has elapsed |
| **HOLD POINT** | Activity is to be witnessed by Zenviron | Advance notification mandatory | Hold point can only be waivered formally in writing |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SECTION 4 - Level 2 - Pre-commissioning/Secondary System Tests** | | | | | | | | | |
| **ITEM** | **ACTIVITY/ TASK DESCRIPTION** | **INSPECTION POINT (QUALITY CONTROL ACTIVITY)** | **ACCEPTANCE CRITERIA** | **VERIFYING DOCUMENT** | **SUPERVISION TYPE** | **RECEIVED AND ANALYSED BY: (ZENVIRON ONLY)** | | | |
| **NAME** | **SIGNED** | **DATE** | **COMMENTS** |
| 4.1 | Earthing System Tests | Injection tests on earthing system to  measure transfer of potential, continuity, step & touch voltages. | As per IFC Drawings and Schedule 02 - Employers Requirements | Substation Earthing Commissioning Report ZX115-REP-7901 | N/A |  |  |  |  |
| 4.2 | 330/33kV Main Transformer | Post assembly inspections of main power  transformer | As per IFC Drawings and Schedule 02 -  Employers Requirements | Subcontractor/OEM Documentation  1 Per Item | N/A |  |  |  |  |
| 4.3 | 330kV Circuit Breaker | Pre-energisation verification testing of 330kV Circuit Breakers Incl | As per IFC Drawings and Schedule 02 - Employers Requirements | ZX115-ITR-7361 Outdoor Circuit Breaker  and/or Subcontractor/OEM Documentation 1 Per Item | N/A |  |  |  |  |
| 4.4 | 330kV Disconnector / Earth Switch | Pre-energisation verification testing of 330kV Disconnector/EarthSwitch(s) | As per IFC Drawings and Schedule 02 - Employers Requirements | ZX115-ITR-7362 Outdoor Disconnector  and/or Subcontractor/OEM Documentation 1 Per Item | N/A |  |  |  |  |
| 4.5 | 330kV Voltage Transformer | Pre-energisation verification testing of the  Voltage Transformer(s) | As per IFC Drawings and Schedule 02 -  Employers Requirements | ZX115-ITR-7379 Outdoor Voltage  Transformer 1 Per item | N/A |  |  |  |  |
| 4.6 | 330kV Current Transformer | Pre-energisation verification testing of the  Current Transformer(s) | As per IFC Drawings and Schedule 02 -  Employers Requirements | ZX115-ITR-7364 Outdoor Current  Transformer 1 Per item | N/A |  |  |  |  |
| 4.7 | 330kV Overhead Busbar and Flexible Conductor | Ductor and insulation resistance testing of 330kV Overhead Busbar and Flexible Conductor | As per IFC Drawings and Schedule 02 - Employers Requirements | ZX115-ITR-7368 Level 2 ITR Overhead Rigid Busbar/Flexible Conductor 1 Per Bay or Section (Or replaced by equivalent Subcontractor Documentation) | N/A |  |  |  |  |
| 4.8 | Neutral Earthing Resistor | Pre-energisation verification testing of the Neutral Earthing Resistor | As per IFC Drawings and Schedule 02 - Employers Requirements | ZX115-ITR-7380 Neutral Earthing Resistor  and/or Subcontractor/OEM Documentation 1 Per Item | N/A |  |  |  |  |

**SECTION 5 - Level 2- Completion**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ITEM** | **ACTIVITY/ TASK DESCRIPTION** | **INSPECTION POINT (QUALITY CONTROL ACTIVITY)** | **ACCEPTANCE CRITERIA** | **VERIFYING DOCUMENT** | **SUPERVISION TYPE** | **RECEIVED AND ANALYSED BY: (ZENVIRON ONLY)** | | | |
| **NAME** | **SIGNED** | **DATE** | **COMMENTS** |
| 5.1 | Redline markup of Construction Drawings | Redline markup of relevent Construction Drawings in Master Drawing Folder | In line with ZX115-REP-0201 Earthworks, Roads and Drainage Specification and BMS- WIN-1024 - Document Red-Line Markup | Redline Markup in Master Drawing Folder | N/A |  |  |  |  |
| 5.1 | Generate Punch List | Subcontractor walk-down inspection | Generate specific area/scope Punch List and transfer the open items to the Punch List  Master Register | BMS-TMP-0044 Punch List record | N/A |  |  |  |  |