***Equipment Installation Verification Procedure:***

***HOW TO USE THIS DOCUMENT:***

**1) Description of Test**

The objective of the test is twofold:

1. To verify that all direct impact equipment components are of the correct specification as per the detailed mechanical data sheets
2. To verify that all direct impact equipment components are installed and configured correctly as per the functional illustration on the P&ID.

**2) Linkage to Requirements Challenged**

Confirm correct installation and primary specifications of direct impact equipment components as detailed in the P&ID and URS.

**3) Acceptance Criteria**

All direct impact components are of the correct specification, are functionally installed and configured as per the P&ID, the vendor handover documentation is complete, and appropriate material certification is available.

**4) Prerequisites and/or Assumptions**

1. All commissioning activities are complete and commissioning punch-list items are closed out.
2. All testers shall be trained and educated in the test method listed in section-5 below: it is crucial to the success of the testing effort that the testing process be well understood by all participants.

**5) Test Method**

1. On the equipment IQ GMP test sheets confirm the equipment description and critical design features. Inspect the installed equipment item in the field and while referencing the vendor’s documentation package verify specification conformance.
2. Confirm that the vendor handover package is in place and contains correct material certificates.
3. In the field visually confirm the following:
4. Equipment item is installed as per P&ID, is securely fitted and is free from damage
5. Nameplate is securely fitted, clearly legible and its details conform to the design specification
6. All process and utility connections, and instrumentation are connected up to the correct nozzles/flanges, as per P&ID

**6) Expected Results and Actual results**

1. In the equipment IQ verification forms, reach a conclusion as to whether each test step has been successfully completed by transcribing bold text from the ‘Expected Results’ column into the corresponding ‘Actual Results’ field where appropriate.
2. Assess each step listed and determine whether the step has passed or failed.
3. The person performing the test should be identified and the date the testing was performed should be recorded.
4. At the bottom of the test script a validation peer (other than the person performing the test) shall review the script post execution.
5. Quality Assurance (QA) shall approve the completed test.

**Equipment Installation Verification and Validation Protocol GMP Checksheet**

|  |  |  |
| --- | --- | --- |
| **Sheet \_\_ of \_\_** | **\_\_\_\_ Installation Verification** | **Tag #: \_\_\_\_\_\_** |
| ***Equipment Description and Critical Design Features*** |
| *Inspect the installed equipment item and the vendor’s documentation and verify correct specification conformance* | Specified | Actual | Verification(Pass/Fail) | Initials / Date |
| **1** | Manufacturer |  |  |  |  |
| **2** | Capacity |  |  |  |  |
| **3** | M.O.C. |  |  |  |  |
| **4** | Design Pressure Range |  |  |  |  |
| **5** | Design Temp Range |  |  |  |  |
| ***Documentation Verification*** |
| *Confirm that the vendor handover package is in place and contains correct material certificates* | Verification(Pass/Fail) | Initials | Date |
| 1 | Vendor handover package is in place  |  |  |  |
| 2 | Material Certification is available for wetted parts |  |  |  |
| ***Installation Verification*** |
| *Visually inspect, and subsequently verify, the correct installation of the equipment item in the field* | Verification(Pass/Fail) | Initials | Date |
| 1 | Equipment item is installed as per P&ID, is securely fitted and is free from damage |  |  |  |
| **2** | Nameplate is securely fitted, clearly legible and its details conform to the design specification |  |  |  |
| **3** | All process and utility connections, and instrumentation are connected up to the correct nozzles/flanges, as per P&ID |  |  |  |

|  |  |  |
| --- | --- | --- |
|  | **Comments:** |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Validation Peer Review** |  |  |  |  |  |
|  | Print Name |  | Signature |  | Date |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **QA Approval** |  |  |  |  |  |
|  | Print Name |  | Signature |  | Date |  |