Hazardous Area Equipment Inspection

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| **JOB No:** |  | | | | **CONTRACT No:** | |  | |
| **ITP No:** | 001 | | **ITP Item No:** | | 3.44 | | | |
| Tag Number: | | | Description: | | | | | |
| System: | | | Sub System: | | | Area: | | |
| Manufacturer: | | | Model No: | | | Serial No: | | |
| Certificate No: | | | Work Pack: | | | HAC Dwg: | | |
| Equipment Classification Ex Technique: | | Protection Concept: | | Gas Group: | | Temp Class: | | IP Rating: |
| Hazardous Area Classification: | | Zone: | | Gas Group: | | Temp Class: | | |
| Inspection Grade – Visual (v) – Close (c) – Detailed (d) | | | | | | | | |

| **Item** | **Description** | | | | | | **Inspection Results** | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Yes /No | | | | | Punch List | | | | N/A | Inspection Grade | | | Comments |
| **A** | **Equipment - Inspections *(AS/NZS60079.14/60079.0/60079.17)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 1 | Equipment is Appropriate to the EPL/Zone Requirements of The Location ***(AS/NZS60079.14 Clauses 5&6)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 2 | Equipment Temperature Class & Gas Group Are Correct for The Classification ***(AS/NZS60079.14.5.6)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 3 | Equipment Circuit Identification is Available & Correct ***(AS/NZS60079.17.4.12.4)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 4 | Enclosure Glass Parts & Glass-to-Metal Sealing Gaskets and/or Compounds are Satisfactory ***(AS/NZS60079.17.4.12)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 5 | There is no Damage or Evidence of Damage or Unauthorised Modifications ***(AS/NZS60079.17.5.3.4 & 4.12)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 6 | Bolts Cable Entry Devices (Direct & Indirect) & Blanking Elements Are of The Type and Are Complete & Tight ***(AS/NZS60079.17.3.1)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 7 | Lamp Rating Type & Position Are Correct ***(AS/NZS60079.17.4.6.1) (60079.14.11.4)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 8 | Electrical Connections Are Tight ***(AS/NZS60079.14.9.6.6)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 9 | Condition of Enclosure Gaskets Is Satisfactory ***(AS/NZS60079.17.4.3.1)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 10 | Motor Fans Have Sufficient Clearance to Enclosure and Or Covers ***(AS/NZS60079.14. H.4)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 11 | Breathing & Draining Devices Are Satisfactory ***(AS/NZS60079.17.4.7)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| B | Installation Requirements (AS/NZS60079.14) (AS/NZS60079.17) (AS/NZS3000) | | | | | |  | | | | |  | | | |  |  | | |  |
| 12 | Type of Cable Is Appropriate ***(AS/NZS60079.14.9.3&Table 6)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 13 | The Cables Are Adequately Supported and There is no Obvious Damage to Cables ***(AS/NZS60079.14.9.3.9)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 14 | Sealing of Trunking Ducts, Pipes, and/or Conduits is Satisfactory ***(AS/NZS60079.14.9.6.8)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 15 | The Integrity of The Conduit System and Interface with Mixed System is Maintained ***(AS/NZS60079.14.9.3.12&9.4)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 16 | Earthing Connections Including any Supplementary Earthing Bonding Connections Are Satisfactory (e.g. Connections Tight & Conductors of Sufficient CSA) ***(AS/NZS60079.14.6.2 &6.3 &6.4)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 17 | There is no Evident Damage or Degradation That Indicates the Fault Loop Impedance (TN-Systems) or Earthing Resistance (TT-Systems) is Not Satisfactory ***(AS/NZS60079.17.4.12.8)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 18 | There is no Evident Damage, or Degradation That Indicates the Insulation Resistance is Not Satisfactory ***(AS/NZS3000.8.3.6 &60079.6.4)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 19 | Automatic Electrical Protective Devices Operate Within Permitted Limits ***(AS/NZS60079.14.7.)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 20 | Automatic Electrical Protective Devices Are Set Correctly (Auto-Reset Not Possible) ***(AS/NZS60079.14.7)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 21 | Specific Conditions of Use Are Complied With (Suffix "X" on a Certificate Denotes Special Requirements ***(AS/NZS60079.17.5.3.2) (AS/NZS60079.0.3.3.8)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 22 | Cables Not in Use Are Correctly Terminated ***(AS/NZS60079.14.9.6.3)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 23 | Variable Voltage/Frequency Installation in Accordance with Documentation ***(AS/NZS60079.14.10.6 & 11.3.4 & 13.2)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| C | Environment Requirements | | | | | |  | | | | |  | | | |  |  | | |  |
| 24 | Equipment is Adequately Protected Against Corrosion, Weather, Vibration and Other Adverse Factors ***(AS/NZS60079.17.4.7)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 25 | No Undue Accumulation of Dust & Dirt ***(AS/NZS60079.17.4.7)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 26 | All Equipment Housings Are Clean & Dry ***(AS/NZS60079.17.4.7)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| Extra Ex d Checks ***(AS/NZS60079.1) (AS/NZS60079.14)*** | | | | | | | | | | | | | | | | | | | | |
| 27 | Confirm that Ex d Conduits Seals are Fitted to all Conduits and Satisfactorily Sealed ***(AS/NZS60079.14.10.5)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 28 | Confirm That Cable Glands are of the Barrier Type and Correctly Installed (Where Applicable) ***(AS/NZS60079.14.10.4.2)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 29 | Confirm That Adaptors, Nipples, Tees, etc. Are all Certified Ex d ***(AS/NZS60079.14.10.4)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 30 | Confirm That no Obstacles Within 10mm (IIA), 30mm (IIB) or 40mm (IIC) of Flange Joints ***(AS/NZS60079.14.10.2)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 31 | Confirm That Flame Paths are Clean and Undamaged ***(AS/NZS60079.14.10.3)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| 32 | Confirm That Flange Gap Dimensions are Within Tolerances ***(AS/NZS60079.1.5.2)*** | | | | | |  | | | | |  | | | |  |  | | |  |
| Extra Ex e Checks ***(AS/NZS60079.7) (AS/NZS60079.14)*** | | | | | | | | | | | | | | | | | | | | |
| 33 | Confirm that all Equipment is Ex e certified (including components within Enclosure) ***(AS/NZS60079.7.8)*** | | | | | | |  | | | | |  | | |  |  | | |  |
| 34 | Confirm That Enclosure Entries Maintain the Degree of Ingress Protection of the Equipment or Area Whichever is The Greater ***(AS/NZS60079.14.11.2.2)*** | | | | | | |  | | | | |  | | |  |  | | |  |
| 35 | Confirm that the No. of Components within Enclosure does not exceed permitted max. ***(AS/NZS60079.14.11.2.4)*** | | | | | | |  | | | | |  | | |  |  | | |  |
| 36 | Confirm that bridging links do not reduce creepage / clearance and are allowed ***(AS/NZS60079.7.4.2.3&4.3)*** | | | | | | |  | | | | |  | | |  |  | | |  |
| 37 | Confirm that power conductors are not bunched together causing possible hot spots ***(AS/NZS60079.14.11.2.4)*** | | | | | | |  | | | | |  | | |  |  | | |  |
| 38 | Confirm that Electrical Connections Are Tight and in Accordance With ***(AS/NZS60079.14.11.2.3&4) (AS/NZS60079.7.4.2)*** | | | | | | |  | | | | |  | | |  |  | | |  |
| Extra Ex n Checks ***(AS/NZS60079.15) (AS/NZS60079.14)*** | | | | | | | | | | | | | | | | | | | | |
| 39 | Confirm That the Insulation of The Conductor Is Maintained Up to The Metal of The Terminal and That Each Conductor Is Adequately Clamped ***(AS/NZS60079.14.14.3.3)*** | | | | | | |  | | | | |  | | |  |  | | |  |
| 40 | Confirm that bridging links do not reduce creepage / clearance Distances and are allowed ***(AS/NZS60079.15.6.4.5)*** | | | | | | |  | | | | |  | | |  |  | | |  |
| 41 | Confirm that hermetically sealed and Enclosed Break devices are undamaged ***(AS/NZS60079.15.18)*** | | | | | | |  | | | | |  | | |  |  | | |  |
| Extra Ex nR Checks ***(AS/NZS60079.15) (AS/NZS60079.14)*** | | | | | | | | | | | | | | | | | | | | |
| 42 | Confirm that gaskets and seals are in good condition ***(AS/NZS60079.15.20.2.7)*** | | | | | | | |  | | | | |  | |  |  | | |  |
| 43 | Confirm Cable Entries to Restricted Breathing Apparatus Not Part of The Certificate Maintain the Restricted Breathing Properties of The Enclosure (***AS/NZS60079.14.14.3.2.2)*** | | | | | | | |  | | | | |  | |  |  | | |  |
| 44 | Confirm that restricted breathing properties are satisfactory (pressure or vacuum test) ***(AS/NZS60079.15.23.2.3)*** | | | | | | | |  | | | | |  | |  |  | | |  |
| 45 | Confirm that label attached indicating time delay before opening ***(AS/NZS60079.15.6.2 & AS/NZS60079.0.6.3)*** | | | | | | | |  | | | | |  | |  |  | | |  |
| Extra Ex p Checks ***(AS/NZS60079.2) (AS/NZS60079.14)*** | | | | | | | | | | | | | | | | | | | | |
| 46 | Confirm That Protective Gas Pressure/Flow & Type & Temperature Is Adequate ***(AS/NZS60079.14.13.1.6)*** | | | | | | | |  | | | | |  | |  |  | | |  |
| 47 | Confirm that actual pressure is within maximum and minimum settings for Equipment ***(AS/NZS60079.14.13.1.3)*** | | | | | | | |  | | | | |  | |  |  | | |  |
| 48 | Confirm That the Purging Time Is in Accordance with Documentation ***(AS/NZS60079.14.13.1.5)*** | | | | | | | |  | | | | |  | |  |  | | |  |
| 49 | Confirm That the Wiring Systems Prevent Ingress of Combustible Gas or Prevent Leakage of Protective Gas ***(AS/NZS60079.14.13.1.7)*** | | | | | | | |  | | | | |  | |  |  | | |  |
| 50 | Confirm That Condition of Spark & Particle Barriers of Ducts for Exhausting Are Satisfactory ***(AS/NZS60079.14.13.1.3.3)*** | | | | | | | |  | | | | |  | |  |  | | |  |
| 51 | Confirm That Alarms and Trip Functions Operate Correctly as per Certification Documentation ***(AS/NZS60079.13.1.3)*** | | | | | | | |  | | | | |  | |  |  | | |  |
| Extra Ex i Checks ***(AS/NZS60079.11) (AS/NZS60079.25) (AS/NZS60079.14)*** | | | | | | | | | | | | | | | | | | | | |
| 52 | Confirm That All Apparatus Is Reasonably Identified As An I.S. System ***(AS/NZS60079.14.12.2.1&12.2.2.6)*** | | | | | | | | |  | | | | |  |  |  | | |  |
| 53 | Confirm There is No Evident Indication or Degradation That the Point to Point Connections Are Not Correct ***(AS/NZS60079.14.12)*** | | | | | | | | |  | | | | |  |  |  | | |  |
| 54 | Confirm Earthing Continuity Is Satisfactory (e.g. Connections are Tight, Conductors Are of Sufficient CSA) For Non-Galvanically Isolated Circuits ***(AS/NZS60079.14.12.2.4)*** | | | | | | | | |  | | | | |  |  |  | | |  |
| 55 | Confirm That Cable Screens Are Earthed in Accordance with Documentation ***(AS/NZS60079.14.12.2.4)*** | | | | | | | | |  | | | | |  |  |  | | |  |
| 56 | Earth Connections Maintain the Integrity of The Type of Protection ***(AS/NZS60079.14.12.2.4)*** | | | | | | | | |  | | | | |  |  |  | | |  |
| 57 | Confirm that separation and segregation is maintained between IS and non-IS Circuits ***(AS/NZS60079.14.12.2.3)*** | | | | | | | | |  | | | | |  |  |  | | |  |
| 58 | Confirm That There Is No Evident Damage or Degradation That Indicates That the Intrinsically Safe Circuit Earthing & Insulation is Not Satisfactory ***(AS/NZS60079.14.12.2.2)*** | | | | | | | | |  | | | | |  |  |  | | |  |
| 59 | Confirm That Short-Circuit Protection of The Power Supply Is in Accordance with Documentation ***(AS/NZS60079.14.12.2.1)*** | | | | | | | | |  | | | | |  |  |  | | |  |
| 60 | Confirm That Cables Not in Use Are Correctly Terminated ***(AS/NZS60079.14.12.2.2.5.3)*** | | | | | | | | |  | | | | |  |  |  | | |  |
| 61 | Confirm That A Descriptive System Document is Available for Each Intrinsically Safe Circuit if a System Certificate Is Not Available ***(AS/NZS60079.14.12.2.5)*** | | | | | | | | |  | | | | |  |  |  | | |  |
| 62 | Barrier: | Make: | |  | | Model No: | | | |  | | | | | | | | | | |
| Authority: | |  | | Cert No: | | | |  | | | | | | | Type: | |  | |
| **COMMENTS:** | | | | | | | | | | | | | | | | | | | | |
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| **Accepted By** | | | **Name (Print)** | | **Signature** | | | | | | **Position** | | | | | | | **Date** | | |
| **Q Electrical** | | |  | |  | | | | | |  | | | | | | |  | | |
| **PM Review** | | |  | |  | | | | | |  | | | | | | |  | | |
| **Client**  **(If Applicable)** | | |  | |  | | | | | |  | | | | | | |  | | |