

S**ENGINEERING CHANGE NOTICE**Page 1 of 21. ECN **662871**Proj.
ECN

| | | | | | | | |
|---|--|---|--|--|--|--|--|
| 2. ECN Category (mark one) Supplemental <input type="checkbox"/> Direct Revision <input checked="" type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Standby <input type="checkbox"/> Supersedure <input type="checkbox"/> Cancel/Void <input type="checkbox"/> | | 3. Originator's Name, Organization, MSIN, and Telephone No. A. Artzer, CVDF, X3-78, 372-2801 | | 4. USQ Required? [X] Yes <input type="checkbox"/> No | | 5. Date 9/14/00 | |
| | | 6. Project Title/No./Work Order No. SNF/W-441, Spent Nuclear Fuel Cold Vacuum Drying | | 7. Bldg./Sys./Fac. No. CVDF 142K | | 8. Approval Designator SNQ | |
| | | 9. Document Numbers Changed by this ECN (includes sheet no. and rev.) SNF-3931, Rev. 3 | | 10. Related ECN No(s). N/A | | 11. Related PO No. N/A | |
| 12a. Modification Work <input type="checkbox"/> Yes (fill out Blk. 12b) <input checked="" type="checkbox"/> No (NA Blks. 12b, 12c, 12d) | | 12b. Work Package No. N/A | | 12c. Modification Work Complete N/A Design Authority/Cog. Engineer Signature & Date | | 12d. Restored to Original Condition (Temp. or Standby ECN only) N/A Design Authority/Cog. Engineer Signature & Date | |
| 13a. Description of Change SCHe Revised valve "A" dimension from 2.12" to 1.88". Changed valve seat leakage characteristic from "Bubble-tight Standard <10 ⁻³ ml He/sec" to "15 minutes at 15 psig. (No leakage, No bubbles". USQ Approval: <u>CVDF-00-1752 9-14-00</u> | | | | | | | |
| 14a. Justification (mark one) Criteria Change <input type="checkbox"/> Design Improvement <input checked="" type="checkbox"/> Environmental <input type="checkbox"/> Facility Deactivation <input type="checkbox"/> As-Found <input type="checkbox"/> Facilitate Const <input type="checkbox"/> Const. Error/Omission <input type="checkbox"/> Design Error/Omission <input type="checkbox"/> | | | | 14b. Justification Details Change in CGI documentation is required to reflect more up to date information from manufacturer and more appropriate test method. The design verification method for SC/SS components is by independent review in accordance with EN-6-027-01. Documentation of this review is accomplished by the independent review approval signature provided on page 2 of this ECN. | | | |
| 15. Distribution (include name, MSIN, and no. of copies) See distribution sheet. | | | | | | RELEASE STAMP SEP 15 2000 DATE: STA: 19 HANFORD RELEASE ID. (25) | |

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DISTRIBUTION SHEET

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Distribution

From
SNF-CVD

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Date 9/14/00

EDT No. N/A

ECN No. 662871

Project Title/Work Order

W-441, CGI Package

[illegible]

Whitey SCHe Ball Valves - Provide Test Port Isolation

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

Fluor Hanford

P.O. Box 1000

Richland, Washington

SNF-3931
Revision 4
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Whitey SCHe Ball Valves - Provide Test Port Isolation

Project No: W-441

Document Type: RPT

Division: SNF

C.R. Miska
Fluor Hanford Inc.

Date Published
September 2000

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

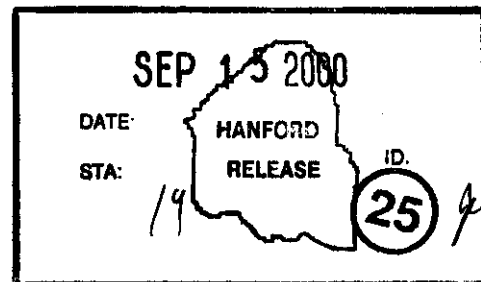
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Release Approval

9/15/00
Date



Release Stamp

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Total Pages: 13

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|---|------------------------------------|------------------|
| Commercial Grade Item Upgrade Dedication Form | | SNF-3931, Rev. 4 |
| ECN No. NA | CGI No. CGI-SNF-D-13-P5-035 | Page 1 of 9 |
| Title: WHITEY SCHe BALL VALVES – PROVIDE TEST PORT ISOLATION | | |

| | | | |
|-----------------------------------|-----------------|-----------|--|
| Section 1 Part Information | | | |
| Item No.: NA | Manufacturer: | Supplier: | |
| Mfg. Part/Model No.: | Supplier's P/N: | | |
| Part Description: | | | |
| End Use Description: | | | |

| | | | |
|---|--|--|--|
| Section 2a Component Information | | | |
| Equipment No.: SCHe-V-*102,*103, *104,*105 He-V-*094, *096, *098, *100 | Specification No.: SNF-5304 (W-441-P5) | Manufacturer: Whitey Co./ Swagelok | Past P.O. No.: NA |
| Procurement and/or Model No.: SS-43VC04-5452-TR | Equipment Supplier (if different from manufacturer): TBD | | Equip. Supplier's Part No.: NA |
| Component Description: These valves are 1/4" ball valves fabricated of 316 stainless steel. Packing is TFE (standard). They are used as normally closed isolation valves for test ports in the SCHe System between the gage root valve and the pressure indicator. | | | |

| | | | | | | | | | |
|---|--------------|-------|--|---------------------|--------------|-------|---|--|--|
| Section 2b Commercial Availability of the Item | | | | | | | | | |
| <p>1. Is the Item available from a catalogue of a qualified NQA1 supplier? (coordinate with project CGI interface Engineer or BTR)</p> <p style="margin-left: 40px;"> <input type="checkbox"/> YES (go to #2 below) <input checked="" type="checkbox"/> NO (go to procedure step 6.3.2, proceed to dedicate Item.) </p> <p style="margin-left: 40px;">If not available from a qualified NQA1 supplier, is it available from an ISO 9000 supplier? (coordinate with project CGI interface Engineer or BTR)</p> <p style="margin-left: 40px;"> <input type="checkbox"/> YES (go to #2 below, then go to procedure step 6.3.2, proceed to dedicate Item) <input checked="" type="checkbox"/> NO (go to procedure step 6.3.2, proceed to dedicate Item.) </p> | | | | | | | | | |
| <p>2. List of Candidate qualified suppliers or ISO 9000 suppliers</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">company name & type</td> <td style="width: 30%;">contact name</td> <td style="width: 30%;">phone</td> </tr> <tr> <td colspan="3" style="height: 40px; vertical-align: top;"> <p style="margin-left: 40px;">NA</p> </td> </tr> </table> | | | | company name & type | contact name | phone | <p style="margin-left: 40px;">NA</p> | | |
| company name & type | contact name | phone | | | | | | | |
| <p style="margin-left: 40px;">NA</p> | | | | | | | | | |
| <p>3. Recommended Procurement Strategy(coordinate with project CGI interface Engineer or BTR): NA</p> | | | | | | | | | |

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| Section 2c CGI Determination | |
| 1. Question #1: Is the Item subject to design or specification requirements that are unique to nuclear facilities or activities? | <input type="checkbox"/> YES (the Item is not commercial grade) <input checked="" type="checkbox"/> NO (continue) |
| 2. Question #2: Is the Item used in applications other than nuclear facilities or activities? | <input type="checkbox"/> NO (the item is not commercial grade) <input checked="" type="checkbox"/> YES (continue) |
| 3. Question #3: Is the Item ordered from manufacturer/supplier on the basis or specifications set forth in the Published product information (e.g., manufacturer's catalog)? | <input type="checkbox"/> NO (the Item is not commercial grade) <input checked="" type="checkbox"/> YES (continue) |
| <input checked="" type="checkbox"/> All three criteria have been satisfied. The Item meets the definition of commercial grade. | |
| Section 2d Reason for Dedication | |
| The above described Item is being Dedicated for use in the application cited for the following reason(s): | |
| <input checked="" type="checkbox"/> | Item is being purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Class application. |
| <input type="checkbox"/> | Item is being purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Significant application. |
| <input type="checkbox"/> | Item was purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Class application. |
| <input type="checkbox"/> | Item was purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Significant application. |
| <input type="checkbox"/> | Other ('like-for-like', similar, substitution, replacement evaluation) |
| Section 3 Failure Effects Evaluation | |
| A. Part/Component Safety Function: | |
| 1. Prevents air inleakage/loss of SCHe during normal operation. Prevent H ₂ Explosion | |
| 2. Pressure boundary integrity/confinement. | |
| 3. Maintain critical function before and after seismic event. | |
| B. Part/Component Functional Mode: | |
| Safety Function #1: | |
| <input type="checkbox"/> | Active – Mechanical or Electrical change of state is required to occur for the component to perform its safety function |
| <input checked="" type="checkbox"/> | Passive – Change of state is not required for the component to perform its safety function |
| Safety Function #2: | |
| <input type="checkbox"/> | Active – Mechanical or Electrical change of state is required to occur for the component to perform its safety function. |
| <input checked="" type="checkbox"/> | Passive – Change of state is not required for the component to perform its safety function |
| Safety Function #3: | |
| <input type="checkbox"/> | Active – Mechanical or Electrical change of state is required to occur for the component to perform its safety function. |
| <input checked="" type="checkbox"/> | Passive – Change of state is not required for the component to perform its safety function |

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| | | |
|--|--|-----------------------------|
| C. Host Component Safety Function (if applicable): NA | | |
| 1. | | |
| D. Failure Mode(s) and the effects on component or system safety function (see Worksheet 1): | | |
| 1. Valve Body Break/Pressure boundary failure. Could result in a loss of SCHe supply from the affected bottle and manifold to the MCO or air intrusion during vacuum operation. | | |
| Section 4 Environmental & Natural Phenomena Hazard Design | | |
| Environmental Qualification Required: | If yes: Environmental Qualification Requirements | |
| Yes [] | Limiting Environmental Conditions: | |
| No [X] | Required Safety Functions: | |
| Environmental Condition B | Qualification Period: | |
| Natural Phenomena Hazard (NPH) Design Required: | If yes: NPH Design Requirements | |
| Yes [X] | Performance Category: PC-3 | |
| No [] | NPH Design Req'ts.: Seismic Condition A | |
| HNF-PRO-97 | Required Safety Functions: Maintain pressure boundary/confinement, prevent H₂ explosion. | |
| SNF-5304 | | |
| Section 5 Component Functional Classification | | |
| [X] Safety Class (SC) | [] General Service | [] Safety Significant (SS) |
| If part/component classification is different from host component/system, document basis. NA | | |
| Section 6 (Reserved) | | |
| Section 7 (Reserved) | | |
| Section 8 References (for Functional Classification) | | |
| National Codes/Standards: | Safety Analysis Report (SAR): | Drawings: H-1-82165 |
| ASME B31.3 | HNF-SD-SNF-SAR-002 | HNF-SD-SNF-SEL-002 |
| Vendor Manual/Manufacturer/Supplier Information: Whitey Co. WHITEY "40" Series Ball Valves, W-1288, July, 1992 | | |
| Other: NA | | |

| | | |
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| Section 9 Critical Characteristics | | | | |
|---|--|---|----------|----------|
| Critical Characteristics Verification Document: Vendor's Manual; HNF-SD-SNF-SEL-002 | Acceptance Criteria/Tolerances | Acceptance Method | ID | Function |
| 1. Item Identification Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified) | | | | |
| Nameplate - Manufacturer | Whitey Co. / Swagelok (Note 5) | 1, IN | X | |
| Valve-Component Number-Procurement and/or Model Number | SS-43VC04-5452-TR, (Per SNF-5304, Section H, Design Data Sheet) | 1, IN | X | |
| "A" Dimension | Nominal 1.88 inches | 1, IN | X | |
| 2. Physical Critical Characteristics (for reasonable assurance that the Item delivered is the Item specified) | | | | |
| Valve Body Material | Stainless Steel (Note 4) | 1,IN 1, T | X | |
| 3. Performance Critical Characteristics (for reasonable assurance that the Item will perform its intended safety function(s)) | | | | |
| Pressure Boundary Integrity | Pressure Test at 165 psig (No Bubbles Note 3) | 1, T | | X |
| Valve Seat Leakage | 15 minutes at 15 psig. (No leakage, No bubbles) | 1, T | | X |
| Environmental | Note 1 | | | |
| Seismic Condition A | Note 2 | 1, T | | X |
| 4. Notes and Legend: | | Acceptance Method: | | |
| <p>1. The ball valve Teflon packing is not subject to degradation from the 40°F and 60% RH or 115°F and 22% RH conditions and is suitable for Environmental Condition B application.</p> <p>2. Maintain critical function before and after seismic event. SNF-5304, Appendix I, page I-2, provides a seismic testing plan for these components at a seismic spectra SNF-4895. Equipment that has been shaker-table tested should not be installed in a plant (Ref. IEEE Standard 344-1984, Section 7). Consequently, the seismic test constitutes a destructive test.</p> <p>3. Pressure test at 110% of 150 psig system design pressure.</p> <p>4. Material verification acceptance method may be by either inspection or test.</p> <p>5. Either Whitey or Swagelok is acceptable.</p> <p>Rev. 4 Revised valve "A" dimension from 2.12" to 1.88". Changed valve seat leakage characteristic from "Bubble-tight Standard <10⁻³ ml He/sec" to "15 minutes at 15 psig. (No leakage, No bubbles)".</p> | | <p>1. Special Test and Inspection 1, IN for Inspection 1,T for Test</p> <p>2. Commercial Grade Survey</p> <p>3. Source Verification</p> <p>4. Vendor/Item History</p> | | |
| Section 10 Initial Review and Approval | | | | |
| Approvals: <i>ana p. delcom for</i> Designated Engineer: <i>Carl Van Kester 9/14/00</i> Design Authority: <i>[Signature] 9/14/00</i> QA Engineer: <i>[Signature] 9/14/00</i> | | | | |

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| WORKSHEET 1 DETERMINATION OF FAILURE MECHANISMS/MODES | | |
|---|--|---|
| SECTION 1 | | |
| Typical Failure Mechanisms | Definition | Applicable to Component under Evaluation |
| Fracture | Separation of a solid accompanied by little or no macroscopic plastic deformation. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Corrosion | The gradual deterioration of a material due to chemical or electrochemical reactions, such as oxidation, between the material and its environment. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Erosion | Destruction of materials by the abrasive action of moving fluids, usually accelerated by the presence of solid particles carried with the fluid. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Open Circuit | An electrical circuit that is unintentionally broken so that there is no complete path for current flow. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Short Circuit | An abnormal connection by which an electrical current is connected to ground, or to some conducting body, resulting in excessive current flow. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Blockage | Clogging of a filtering medium resulting in the inability to perform its purification function or blockage of flow. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Seizure | Binding of a normally moving item through excessive pressure, temperature, friction, jamming. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Unacceptable Vibration | Mechanical oscillations produced are beyond the defined permissible limits due to unbalancing, poor support, or rotation at critical speeds. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Loss of Properties | A loss of mechanical and physical properties of a material due to exposure to high temperatures, radiation exposure. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Excess Strain | Under the action of excessive external forces the material of the part has been deformed or distorted. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Mechanical Creep | From prolonged exposure to high temperature and stress, the object will show a slow change in its physical (shape and dimension) and mechanical characteristics. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Ductile Fracture | Fracture characterized by tearing of metal accompanied by appreciable gross plastic deformation. | Yes [] No [X]; If Yes, indicate failure Mode. _____ |
| Section 2 Additional Failure Modes Applicable to the Component Under Evaluation | | |
| 1. Valve Body Break | | |
| 2. | | |

| | | |
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CHECKLIST 1
ACCEPTANCE METHOD 1
SPECIAL TEST/INSPECTION VERIFICATION

| SECTION 1 | | | |
|---|-------------------------------------|---|---|
| Item Description: Whitey SCHe Ball Valve | | Equip #: SCHe-V-*102,*103,*104,*105 He-V-*094,*096,*098,*100 | |
| System #: 13 | | Procurement and/or Model #: SS-43VC04-5452-TR | |
| Manufacturer (Address/Phone): Whitey Co. 318 Bishop Road Highland Heights, OH 44143 P.O. # | | Supplier (Address/Phone): | |
| SECTION 2 CRITICAL CHARACTERISTICS TO BE VERIFIED BY METHOD 1. | | | |
| Insp | Test | Post-Test | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Nameplate - Manufacturer |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Valve-Component Number-Procurement and/or Model Number |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. "A" Dimension |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Valve Body Material (Verification may be by either inspection or test) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 5. Pressure Boundary Integrity |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 6. Valve Seat Leakage |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. Seismic Condition A |
| SECTION 3 BY INSPECTION | | | |
| * See Attachment H of Desk Instruction for Sampling Size | | | |
| Characteristic: Nameplate - Manufacturer | | | |
| Sample Size*: All Items | | | |
| Acceptance Criteria: Whitey Co. / Swagelok (Either Whitey or Swagelok is acceptable) | | | |
| Receipt Inspection Plan / Report #: _____ | | | |
| References (see Section 8): _____ | | | |
| Characteristic: Valve-Component Number-Procurement and/or Model Number | | | |
| Sample Size*: All Items | | | |
| Acceptance Criteria: SS-43VC04-5452-TR, (Per SNF-5304, Section H, Design Data Sheet) | | | |
| Receipt Inspection Plan / Report #: _____ | | | |
| References (see Section 8): Whitey Co.- Whitey "40" Series Ball Valves, W-1288, July, 1992 | | | |

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Characteristic: **"A" Dimension**
Sample Size*: **All Items**
Acceptance Criteria: **Nominal 1.88 inches**
Receipt Inspection Plan / Report #: _____
References (see Section 8): _____

Characteristic: **Valve Body Material**
Sample Size*: **Normal Sampling Size**
Acceptance Criteria: **Stainless Steel**
Receipt Inspection Plan / Report #: _____
References (see Section 8): _____

SECTION 4 BY SPECIAL TEST

* See Attachment H of Desk Instruction for Sampling Size

| | |
|--|--|
| Test To Be Performed by: <input type="checkbox"/> Purchaser <input type="checkbox"/> Supplier/Manufacturer** <input type="checkbox"/> Other | Number of Items to be Tested: Test/Inspection Location: |
|--|--|

Characteristic for Test: **Pressure Boundary Integrity**
Acceptance Criteria: **Pressure Test at 165 psig (No Bubbles)**
Sample Size*: **Normal Sampling Size**
Actual Test Value:
Test Plan and Report #: _____
References (see Section 8): _____

Characteristic for Test: **Valve Seat Leakage**
Acceptance Criteria: **15 minutes at 15 psig. (No leakage, No bubbles).**
Sample Size*: **Normal Sampling Size**
Actual Test Value:
Test Plan and Report #: _____
References (see Section 8): _____

Characteristic for Test: **Seismic Condition A**
Acceptance Criteria: **Maintain Critical Function Before and After Seismic Event**
Sample Size*: **SNF-5304, Appendix I, page I-2, provides the seismic testing plan for these components. The seismic testing is conducted for one complete panel with the components assembled on the panel and tested as a complete assembly. The test seismically qualifies the entire assembly, including mountings, piping, and components. The number of components tested is dictated by the panel assembly design.**
Actual Test Value:
Test Plan and Report #: _____
References (see Section 8): _____

**If Supplier/Manufacturer or Other, Refer to CGI Checklist-2 for Support Information

| | | |
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| Section 5 Test / Inspection Summary (Acceptance Method 1) | | | | | | | | | | | |
|---|---|----|----------|-------------|---|---------------|---------------|---------------|------------------------|------------------------|------|
| 1. SUMMARY OF VERIFIED CRITICAL CHARACTERISTICS , THEIR VERIFICATION METHODS, AND RESULTS | | | | | | | | | | | |
| ITEM DESCRIPTION: | | | | | | | | | | | |
| Critical Characteristics | | | | | Verification Results | | | | | | |
| Critical Characteristics | Acceptance Criteria/Tolerances | ID | Function | Method T/IN | Procedure or RR# | Check-list ID | Number Tested | Number Failed | Verifying Organization | Printed Name Signature | Date |
| Nameplate - Manufacturer | Whitey Co./Swagelok (Either Whitey or Swagelok is acceptable) | X | | | | | | | | | |
| Valve-Component Number-Procurement and/or Model Number | SS-43VC04-5452-TR, (Per SNF-5304, Section H, Design Data Sheet) | X | | | | | | | | | |
| "A" Dimension | Nominal 1.88 inches | X | | | | | | | | | |
| Valve Body Material | Stainless Steel | X | | | | | | | | | |
| Pressure Boundary Integrity | Pressure Test at 165 psig (No Bubbles) | | X | | | | | | | | |
| Valve Seat Leakage | 15 minutes at 15 psig. (No leakage, No bubbles) | | X | | | | | | | | |
| Seismic Condition A | Maintain Critical Function Before and After Seismic Event. | | X | | | | | | | | |
| 2. DISPOSITION OF UNVERIFIED OR FAILED CRITICAL CHARACTERISTICS | | | | | | | | | | | |
| Critical Characteristic | | | | | Disposition | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 3. SIGNATURE INDICATES ALL CRITICAL CHARACTERISTICS VERIFIED SATISFACTORY OR ACCEPTABLY DISPOSITIONED AND COMMERCIAL GRADE DEDICATION IS SATISFACTORY AND COMPLETE. | | | | | | | | | | | |
| Testing Agency Approval: _____ Date _____ | | | | | BUYER VERIFICATION | | | | | | |
| Testing Agency QA Engineer: _____ Date _____ | | | | | Design Authority: _____ Date _____ QA Engineer: _____ Date _____ | | | | | | |

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| Section 6 Contacts/Phone Numbers | |
|--|------------------------------|
| Name | Phone |
| Design Authority | () |
| QA | () |
| QC | () |
| Cog - Engineer | () |
| CGI Engineer | () |
| Procurement Engineer | () |
| Other | () |
| Section 7 Supporting Documentation for this Checklist | |
| Initial Procurement Documents | For Critical Characteristics |
| <input type="checkbox"/> Drawings: | |
| <input type="checkbox"/> Manuals (specify type & number): | |
| <input type="checkbox"/> Design Calculations | |
| <input type="checkbox"/> Installation Instructions | |
| <input type="checkbox"/> Operation Instructions | |
| <input type="checkbox"/> Calibration Instructions | |
| <input type="checkbox"/> Manufacturer's Recommended Spare Parts List | |
| <input type="checkbox"/> Other: | |
| Procurement Documents | |
| <input type="checkbox"/> Certificate of Conformance/Compliance | |
| <input type="checkbox"/> Seismic Qualification Certificate | |
| <input type="checkbox"/> Environmental Qualification Certificate | |
| <input type="checkbox"/> Test Report (s): | |
| <input type="checkbox"/> Inspection Report (s): | |
| <input type="checkbox"/> CMTRs for ASME Pressure Retaining Materials | |
| <input type="checkbox"/> Valve Seat Leakage Report | |
| <input type="checkbox"/> Weld Records | |
| <input type="checkbox"/> Material Traceability Record | |
| <input type="checkbox"/> Other: | |