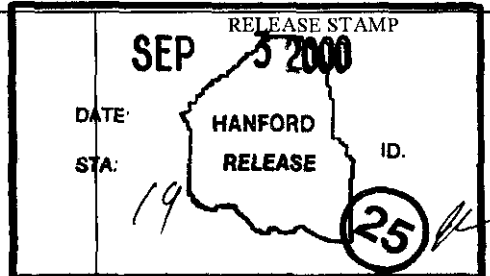


ENGINEERING CHANGE NOTICE

1. ECN **662314**

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"/> Supersedeure <input type="checkbox"/> Cancel/Void <input type="checkbox"/>	3. Originator's Name, Organization, MSIN, and Telephone No. T. Nuxall, CVDF, R3-86, 372-3739		4. USQ Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Date 9/2/00
	6. Project Title/No./Work Order No. SNF/W-441 Spent Nuclear Fuel Cold Vacuum Drying		7. Bldg./Sys./Fac. No. CVDF 142-K	8. Approval Designator Q
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) See block 13a		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 Hood SNF-3876, Rev. 2, SNF-3877, Rev. 2, SNF-3878, Rev. 1, SNF-3879, Rev. 3, SNF-3880, Rev. 1, SNF-3881, Rev. 2, SNF-3882, Rev. 2, SNF-3883, Rev. 3, SNF-3884, Rev. 2, SNF-3886, Rev. 2 , Rev. 1, SNF-4418, Rev. 1, SNF-3933, Rev. 1, SNF-3936, Rev. 2, SNF-5964, Rev. 0, SNF-5970, Rev. 1 ^{HMC} _{9/2/00} SNF-4419, Rev. 1 ^{9/2/00}				
13b. Design Baseline Document? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No SC Updated document numbers and deleted revision numbers. USQ Approval: CX B.1 from AP-NS-4-001-15.				
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 Editorial changes for configuration control. The design verification method for SS/SC 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.				



ENGINEERING CHANGE NOTICE

16. Design Verification Required <input checked="" type="checkbox"/> Yes <i>9/2/00</i> <input checked="" type="checkbox"/> No	17. Cost Impact NA <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">ENGINEERING</td> <td style="text-align: center;">CONSTRUCTION</td> </tr> <tr> <td>Additional <input type="checkbox"/> \$</td> <td>Additional <input type="checkbox"/> \$</td> </tr> <tr> <td>Savings <input type="checkbox"/> \$</td> <td>Savings <input type="checkbox"/> \$</td> </tr> </table>	ENGINEERING	CONSTRUCTION	Additional <input type="checkbox"/> \$	Additional <input type="checkbox"/> \$	Savings <input type="checkbox"/> \$	Savings <input type="checkbox"/> \$	18. Schedule Impact (days) NA Improvement <input type="checkbox"/> Delay <input type="checkbox"/>
ENGINEERING	CONSTRUCTION							
Additional <input type="checkbox"/> \$	Additional <input type="checkbox"/> \$							
Savings <input type="checkbox"/> \$	Savings <input type="checkbox"/> \$							

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD <input type="checkbox"/>	Seismic/Stress Analysis <input type="checkbox"/>	Tank Calibration Manual <input type="checkbox"/>
Functional Design Criteria <input type="checkbox"/>	Stress/Design Report <input type="checkbox"/>	Health Physics Procedure <input type="checkbox"/>
Operating Specification <input type="checkbox"/>	Interface Control Drawing <input type="checkbox"/>	Spares Multiple Unit Listing <input type="checkbox"/>
Criticality Specification <input type="checkbox"/>	Calibration Procedure <input type="checkbox"/>	Test Procedures/Specification <input type="checkbox"/>
Conceptual Design Report <input type="checkbox"/>	Installation Procedure <input type="checkbox"/>	Component Index <input type="checkbox"/>
Equipment Spec. <input type="checkbox"/>	Maintenance Procedure <input type="checkbox"/>	ASME Coded Item <input type="checkbox"/>
Const. Spec. <input type="checkbox"/>	Engineering Procedure <input type="checkbox"/>	Human Factor Consideration <input type="checkbox"/>
Procurement Spec. <input type="checkbox"/>	Operating Instruction <input type="checkbox"/>	Computer Software <input type="checkbox"/>
Vendor Information <input type="checkbox"/>	Operating Procedure <input type="checkbox"/>	Electric Circuit Schedule <input type="checkbox"/>
OM Manual <input type="checkbox"/>	Operational Safety Requirement <input type="checkbox"/>	ICRS Procedure <input type="checkbox"/>
FSAR/SAR <input type="checkbox"/>	IEFD Drawing <input type="checkbox"/>	Process Control Manual/Plan <input type="checkbox"/>
Safety Equipment List <input type="checkbox"/>	Cell Arrangement Drawing <input type="checkbox"/>	Process Flow Chart <input type="checkbox"/>
Radiation Work Permit <input type="checkbox"/>	Essential Material Specification <input type="checkbox"/>	Purchase Requisition <input type="checkbox"/>
Environmental Impact Statement <input type="checkbox"/>	Fac. Proc. Samp. Schedule <input type="checkbox"/>	Tickler File <input type="checkbox"/>
Environmental Report <input type="checkbox"/>	Inspection Plan <input type="checkbox"/>	
Environmental Permit <input type="checkbox"/>	Inventory Adjustment Request <input type="checkbox"/>	

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
NA		

21. Approvals

Signature	Date	Signature	Date
Design Authority C. Miska <i>C. Miska</i>	9-2-00	Design Agent	_____
Cog. Eng. N/A	_____	PE	_____
Cog. Mgr. C. Haller <i>B. J. Parker for C. Haller</i>	9-2-00	QA	_____
QA H. Chafin <i>Hank M. Chafin</i>	9/2/00	Safety	_____
Safety N/A	_____	Design	_____
Ind. Review B. Parker <i>B. Parker</i>	9-2-00	Environ.	_____
	_____	Other	_____
	_____		_____
	_____		_____
	_____		_____
	_____		_____
	_____		_____
	_____		_____
	_____		_____
	_____		_____
	_____		_____

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

DISTRIBUTION SHEET

To Distribution	From SNF-CVD	Page 1 of 1
Project Title/Work Order W-441, P4 CGI Packages <i>Editorial updates.</i>		Date 9/2/00
		EDT No.
		ECN No. 662314

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
D. Whitehurst	X3-78	x			
G. Singh	X3-78	x			
CVD Library	X3-78	x			
R. Ramsgate	X3-78	x			
J. Brehm	X3-79	x			
P. Beaudet	S8-07	x			
P. Morrell (AVS)	G1-50	x			
C. Miska	X3-78	x			
L. Price	R3-26	x			
SNF Startup	B2-64	x			
SNF Project Files	R3-11	x			
SNF Satelite Library	X3-25	x			
C. Van Katwijk	R3-47	x			
D. Whitworth	R3-11	x			
T. Nuxall	X3-78	x			

Griswold Tempered Water Flow Regulator Valves Used As Anti-Siphon Valves

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

Griswold Tempered Water Flow Regulator Valves Used As Anti- Siphon Valves

Project No: W-441

Document Type: RPT

Division: SNF


C Miska
FH

Date Published
September 2000

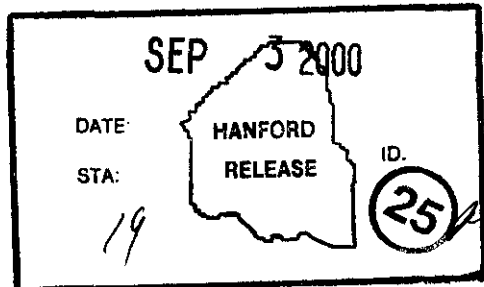
Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

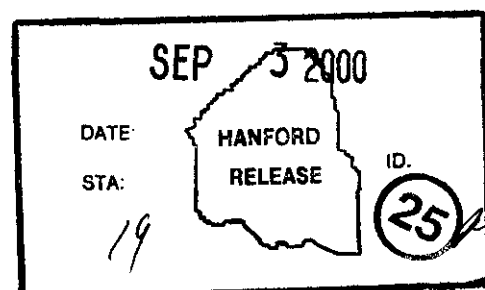
*Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200*

Fluor Hanford
P.O. Box 1000
Richland, Washington


Release Approval

9/3/2000
Date


Release Stamp



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Printed in the United States of America

Total Pages: 15

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RECORD OF REVISION

(1) Document Number
SNF-3878

Page 1

(2) Title
GRISWOLD TEMPERED WATER FLOW REGULATOR VALVES USED AS ANTI-SIPHON VALVES

Change Control Record

(3) Revision	(4) Description of Change - Replace, Add, and Delete Pages	Authorized for Release		
		(5) Cog. Engr.	(6) Cog. Mgr.	Date
1	(7) ECN 653776, REVISION TO MEET SEL REV. 6	C. Miska	T. Choho	
RS 2	ECN 662314, EDITORIAL CHANGE TO UPDATE REFERENCES FOR CONFIGURATION CONTROL	<i>[Signature]</i> <i>CSK 9/12/00</i>	<i>[Signature]</i> 9/13/00 for Haller	

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ECN No. **NA** CGI No. **CGI-SNF-D-47-P4-003**
 Title: **GRISWOLD TEMPERED WATER FLOW REGULATOR VALVES
 USED AS ANTI-SIPHON VALVES**

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Section 1 Part Information

Item No.: NA	Manufacturer: N/A	Supplier: N/A
Mfg. Part/Model No.: N/A	Supplier's P/N: N/A	
Part Description: N/A		
End Use Description: N/A		

Section 2a Component Information

Equipment No.: TW-FCV-1*22; TW-FCV-1*23	Specification No.: SNF-5303 (W-441-P4)	Manufacturer: Griswold Controls	Past P.O. No.: NA
Procurement and/or Model Number: 4902F	Equipment Supplier (if different from manufacturer): K. J. Barnett		Equip. Supplier's Part No.: NA

Component Description: **FCV-1*22 and 1*23 are Griswold constant flow regulators used as anti-siphon valves in the tempered water system, they fail closed but valve cartridge orifice allows minimum flow to prevent loss of water from the MCO/CASK annulus.**

Section 2b Commercial Availability of the Item

1. Is the Item available from a catalogue of a qualified NQA1 supplier? (coordinate with project CGI interface Engineer or BTR)
- YES (go to #2 below)
- NO (go to procedure step 5.3.2, proceed to dedicate Item.)
- If not available from a qualified NQA1 supplier, is it available from an ISO 9000 supplier? (coordinate with project CGI interface Engineer or BTR)
- YES (go to #2 below, then go to procedure step 5.3.2, proceed to dedicate Item)
- NO (go to procedure step 5.3.2, proceed to dedicate Item.)

2. List of Candidate qualified suppliers or ISO 9000 suppliers
- | company name & type | contact name | phone |
|---------------------|--------------|-------|
| NA | | |

3. Recommended Procurement Strategy (coordinate with project CGI interface Engineer or BTR): **NA**

Section 2c CGI Determination

1. Question #1: Is the Item subject to design or specification requirements that are unique to nuclear facilities or activities?
- YES (the Item is not commercial grade)
- NO (continue)
2. Question #2: Is the Item used in applications other than nuclear facilities or activities?
- NO (the item is not commercial grade)
- YES (continue)

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Title: **GRISWOLD TEMPERED WATER FLOW REGULATOR VALVES
USED AS ANTI-SIPHON VALVES**

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)?

- NO (the Item is not commercial grade)
 YES (continue)

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):

- Item is being purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Class application.
- Item is being purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Significant application.
- Item was purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Class application.
- Item was purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Significant application.
- Other ('like-for-like', similar, substitution, replacement evaluation)

Section 3 Failure Effects Evaluation

A. Part/Component Safety Function:

1. **The tempered water system's safety function is to prevent overheating the MCO contents and a runaway reaction. The anti-siphon valves contribute to this function by preventing reverse flow siphoning from the MCO/CASK annulus.**

B. Part/Component Functional Mode:

Safety Function #1:

- Active – Mechanical or Electrical change of state is required to occur for the component to perform its safety function
- Passive – Change of state is not required for the component to perform its safety function

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 Binding - Failure to remain minimally open - Siphon of Annulus Water**

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 USED AS ANTI-SIPHON VALVES**

Section 4 Environmental & Natural Phenomena Hazard Design		
Environmental Qualification Required: Yes [] No [X]	If yes: Environmental Qualification Requirements Limiting Environmental Conditions: Required Safety Functions: Qualification Period:	
Environmental Condition B		
Natural Phenomena Hazard (NPH) Design Required: Yes [X] No []	If yes: NPH Design Requirements Performance Category: PC-3 NPH Design Req'ts.: Seismic Condition A Required Safety Functions: Prevent siphon of MCO/CASK tempered water	
HNF-PRO-97 SNF-5303		
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.		
Section 6 (Reserved)		
Section 7 (Reserved)		
Section 8 References (for Functional Classification)		
National Codes/Standards: ASME B 31.3	Safety Analysis Report (SAR): HNF-SD-SNF-SAR-002	Drawings: H-1-82161 HNF-SD-SNF-SEL-002
Vendor Manual/Manufacturer/Supplier Information: Griswold F-2723A		
Other: NA		

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Section 9 Critical Characteristics

Critical Characteristics Verification Document: Vendor Specifications; 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	Griswold Controls	1, IN	X	
Valve-Component Number-Procurement and/or Model Number	4902F (Per SNF-5303, Section H, Design Data Sheet)	1, IN	X	
2. Physical Critical Characteristics (for reasonable assurance that the Item delivered is the Item specified)				
Valve body and plug material	Stainless steel (Note 4)	1, IN 1, T	X	
End Connection	3/4" FNTF	1, IN	X	
Dimensions	Nominal length 4" and 1.5 lbs. weight	1, IN	X	
3. Performance Critical Characteristics (for reasonable assurance that the Item will perform its intended safety function(s))				
Pressure Boundary	Pressure Test At 165 psig (Zero Leakage) Note 3	1, T		X
Valve Reverse Flow	Apply 30 psid reverse flow (Ensure Nominal orifice flow)	1, T		X
Flow Rate	Maintain nominal 1 gpm output over input range of 4 to 30 psid.	1, T		X
Environmental	Note 1			
Seismic Condition A	Note 2	1, T		X

4. Notes and Legend:

- These valves contain a non-metallic Viton O-ring, and this material is not subject to degradation at 40°F and 60% RH or 115°F and 22% RH and suitable for Environmental Condition B.
- Maintain critical function before and after Seismic event. SNF-5303, Appendix L, page L-16, provides a seismic testing plan for these components at a SNF-4896 seismic spectra. 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. The industry sampling practice for destructive test is to test only one item.
- Pressure test at 110% of design accident condition pressure of 150 psig and full vacuum.
- Material verification acceptance method may be by either inspection or test.

Rev. 2: Updated reference documentation.

Acceptance Method:

- Special Test and Inspection
1, IN for Inspection
1,T for Test
- Commercial Grade Survey
- Source Verification
- Vendor/Item History

Section 10 Initial Review and Approval

Approvals: *see for per telcom*
 Designated Engineer: *Carl Vanderhoff 9/2/00*
 Design Authority: *[Signature] 9/2/00*
 QA Engineer: *Harold M. Chepin 9/2/00*

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Title: GRISWOLD TEMPERED WATER FLOW REGULATOR VALVES
USED AS ANTI-SIPHON VALVES

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 [<input type="checkbox"/>] Mode _____	No [<input checked="" type="checkbox"/>]; 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 [<input type="checkbox"/>] Mode _____	No [<input checked="" type="checkbox"/>]; 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 [<input type="checkbox"/>] Mode _____	No [<input checked="" type="checkbox"/>]; 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 [<input type="checkbox"/>] Mode _____	No [<input checked="" type="checkbox"/>]; 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 [<input type="checkbox"/>] Mode _____	No [<input checked="" type="checkbox"/>]; 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 [<input type="checkbox"/>] Mode _____	No [<input checked="" type="checkbox"/>]; If Yes, indicate failure Mode _____
Seizure	Binding of a normally moving item through excessive pressure, temperature, friction, jamming.	Yes [<input checked="" type="checkbox"/>] Mode _____	No [<input type="checkbox"/>]; If Yes, indicate failure Mode Valve Binding - Failure to remain open _____
Unacceptable Vibration	Mechanical oscillations produced are beyond the defined permissible limits due to unbalancing, poor support, or rotation at critical speeds.	Yes [<input type="checkbox"/>] Mode _____	No [<input checked="" type="checkbox"/>]; 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 [<input type="checkbox"/>] Mode _____	No [<input checked="" type="checkbox"/>]; 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 [<input type="checkbox"/>] Mode _____	No [<input checked="" type="checkbox"/>]; 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 [<input type="checkbox"/>] Mode _____	No [<input checked="" type="checkbox"/>]; If Yes, indicate failure Mode _____
Ductile Fracture	Fracture characterized by tearing of metal accompanied by appreciable gross plastic deformation.	Yes [<input type="checkbox"/>] Mode _____	No [<input checked="" type="checkbox"/>]; If Yes, indicate failure Mode _____

Section 2 Additional Failure Modes Applicable to the Component Under Evaluation

1.

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

SECTION 1	
Item Description: Griswold Flow Regulator Valves System #: 47	Equip #: TW-FCV-1*22 & 1*23 Procurement and/or Model #: 4902 F
Manufacturer (Address/Phone): Griswold Controls 2803 Barranca Road PO Box 19612 Irvine, CA 92714 (714) 559-6000 P.O. #	Supplier (Address/Phone): KJ Barnett (425) 881-1128

SECTION 2 CRITICAL CHARACTERISTICS TO BE VERIFIED BY METHOD 1.

Insp	Test	Post-Test	
[X]	[]	[]	1. Nameplate - Manufacturer
[X]	[]	[]	2. Valve-Component Number-Procurement and/or Model Number
[X]	[X]	[]	3. Valve body and plug material (Verification may be done by either inspection or test)
[X]	[]	[]	4. End Connection
[X]	[]	[]	5. Dimensions
[]	[X]	[]	3. Pressure Boundary
[]	[X]	[]	4. Valve Reverse Flow
[]	[X]	[]	5. Flow Rate
[]	[X]	[]	6. Seismic Condition A

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Title: GRISWOLD TEMPERED WATER FLOW REGULATOR VALVES
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SECTION 3 BY INSPECTION

* See Attachment G of Desk Instruction for Sampling Size

Characteristic: **Nameplate - Manufacturer**

Sample Size*: **All Items**

Acceptance Criteria: **Griswold Controls**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

Characteristic: **Valve-Component Number-Procurement and/or Model Number**

Sample Size*: **All Items**

Acceptance Criteria: **4902F (Per SNF-5303, Section H, Design Data Sheet)**

Receipt Inspection Plan / Report #: _____

References (see Section 7): **Griswold F-2723A**

Characteristic: **End Connection**

Sample Size*: **All Items**

Acceptance Criteria: **3/4" FNTF**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

Characteristic: **Dimensions**

Sample Size*: **All Items**

Acceptance Criteria: **Nominal length 4" and 1.5 lbs. weight**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

Characteristic: **Valve Body Material**

Sample Size*: **Normal Sampling Size**

Acceptance Criteria: **Stainless Steel**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

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 USED AS ANTI-SIPHON VALVES**

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SECTION 4 BY SPECIAL TEST

* See Attachment G 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**
 Acceptance Criteria: **Pressure Test at 165 psig (Zero Leakage)**
 Sample Size*: **Normal Sampling Size**
 Actual Test Value:
 Test Plan and Report #: _____ References (see Section 7): _____

Characteristic for Test: **Valve Reverse Flow**
 Acceptance Criteria: **Apply 30 psid reverse flow (Ensure Nominal orifice flow)**
 Sample Size*: **Normal Sampling Size**
 Actual Test Value:
 Test Plan and Report #: _____ References (see Section 7): _____

Characteristic for Test: **Flow Rate**
 Acceptance Criteria: **Maintain nominal 1 gpm output over input range of 4 to 30 psid.**
 Sample Size*: **Normal Sampling Size**
 Actual Test Value:
 Test Plan and Report #: _____ References (see Section 7): _____

Characteristic for Test: **Seismic Condition A**
 Acceptance Criteria: **Maintain critical function before and after Seismic event.**
 Sample Size*: **Destructively Test Only One Item**
 Actual Test Value:
 Test Plan and Report #: _____ References (see Section 7): _____

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

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CGI No. <u>CGI-SNF-D-47-P4-003</u>	Page 9 of 11
Title: <u>GRISWOLD TEMPERED WATER FLOW REGULATOR VALVES USED AS ANTI-SIPHON VALVES</u>	

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	Griswold Controls	X									
Valve-Component Number-Procurement and/or Model Number	4902F (Per SNF-5303, Section H, Design Data Sheet)	X									
Valve body and plug material	Stainless steel	X									
End Connection	3/4" FNTF	X									
Dimensions	Nominal length 4" and 1.5 lbs. weight	X									
Pressure Boundary	Pressure Test at 165 psig (Zero Leakage)		X								
Valve Reverse Flow	Apply 30 psid reverse flow (Ensure Nominal orifice flow)		X								
Flow Rate	Maintain nominal 1 gpm output over input range of 4 to 30 psid.		X								
Seismic Condition A	Maintain critical function before and after Seismic event.		X								

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ECN No. NA CGI No. CGI-SNF-D-47-P4-003
 Title: GRISWOLD TEMPERED WATER FLOW REGULATOR VALVES
 USED AS ANTI-SIPHON VALVES

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 _____
 Testing Agency QA Engineer: _____ Date _____

BUYER VERIFICATION

Design Authority: _____ Date _____
 QA Engineer: _____ Date _____

Commercial Grade Item Upgrade Dedication Form

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 Title: GRISWOLD TEMPERED WATER FLOW REGULATOR VALVES
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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:	