ENGINEERING CHANGE NOTICE

Page 1 of 21. ECN **663932**Proj.
ECN

2. ECN Category (mark one) Supplemental ☐ Direct Revision ☒ Change ECN ☐ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐	3. Originator's Name, Organization, MSIN, and Telephone No. A. Artzer, CVDF, X3-78, 372-2785	4. USQ Required? ☒ Yes ☐ No	5. Date 10/30/00
	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 S^NQ
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) SNF-3936, Rev. 4	10. Related ECN No(s). N/A	11. Related PO No. N/A
12a. Modification Work ☐ Yes (fill out Blk. 12b) ☒ 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 Revised Burst Pressure to ± 2 psig of Stamped Burst Pressure. Added Stamped Burst Pressure Verification. Changed Acceptance Method for Inspect Disc after Rupture from 1,T to 1,IN. 13b. Design Baseline Document? ☐ Yes ☒ No SC USQ Approval: CVD-00-2203			
14a. Justification (mark one) Criteria Change ☐ Design Improvement ☐ Environmental ☐ Facility Deactivation ☐ As-Found ☒ Facilitate Const ☐ Const. Error/Omission ☐ Design Error/Omission ☐	14b. Justification Details Revision is necessary to allow dedication of other lots of rupture discs, which may have slightly different stamped burst pressure. 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 <div style="border: 1px solid black; padding: 5px;"> NOV 1 2000 DATE: STA: #19 HANFORD RELEASE ID: (15) </div>	

ENGINEERING CHANGE NOTICE				Page 2 of 2	1. ECN (use no. from pg. 1) 663932																																								
16. Design Verification Required ☒ Yes ☐ No	17. Cost Impact <table style="width: 100%; border: none;"> <tr> <th colspan="2" style="text-align: center;">ENGINEERING</th> <th colspan="2" style="text-align: center;">CONSTRUCTION</th> </tr> <tr> <td style="text-align: right;">Additional</td> <td style="text-align: center;">[N/A]</td> <td style="text-align: right;">Additional</td> <td style="text-align: center;">[N/A]</td> </tr> <tr> <td></td> <td style="text-align: center;">\$</td> <td></td> <td style="text-align: center;">\$</td> </tr> <tr> <td style="text-align: right;">Savings</td> <td style="text-align: center;">[N/A]</td> <td style="text-align: right;">Savings</td> <td style="text-align: center;">[N/A]</td> </tr> <tr> <td></td> <td style="text-align: center;">\$</td> <td></td> <td style="text-align: center;">\$</td> </tr> </table>			ENGINEERING		CONSTRUCTION		Additional	[N/A]	Additional	[N/A]		\$		\$	Savings	[N/A]	Savings	[N/A]		\$		\$	18. Schedule Impact (days) <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Improvement</td> <td style="text-align: center;">[N/A]</td> </tr> <tr> <td style="text-align: right;">Delay</td> <td style="text-align: center;">[N/A]</td> </tr> </table>	Improvement	[N/A]	Delay	[N/A]																	
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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 ☐ Functional Design Criteria ☐ Operating Specification ☐ Criticality Specification ☐ Conceptual Design Report ☐ Equipment Spec. ☐ Const. Spec. ☐ Procurement Spec. ☐ Vendor Information ☐ OM Manual ☐ FSAR/SAR ☐ Safety Equipment List ☐ Radiation Work Permit ☐ Environmental Impact Statement ☐ Environmental Report ☐ Environmental Permit ☐	Seismic/Stress Analysis ☐ Stress/Design Report ☐ Interface Control Drawing ☐ Calibration Procedure ☐ Installation Procedure ☐ Maintenance Procedure ☐ Engineering Procedure ☐ Operating Instruction ☐ Operating Procedure ☐ Operational Safety Requirement ☐ IEFD Drawing ☐ Cell Arrangement Drawing ☐ Essential Material Specification ☐ Fac. Proc. Samp. Schedule ☐ Inspection Plan ☐ Inventory Adjustment Request ☐	Tank Calibration Manual ☐ Health Physics Procedure ☐ Spares Multiple Unit Listing ☐ Test Procedures/Specification ☐ Component Index ☐ ASME Coded Item ☐ Human Factor Consideration ☐ Computer Software ☐ Electric Circuit Schedule ☐ ICRS Procedure ☐ Process Control Manual/Plan ☐ Process Flow Chart ☐ Purchase Requisition ☐ Tickler File ☐ N/A ☒																																											
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.																																													
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DISTRIBUTION SHEET

To Distribution	From D. Daling, SNF-CVD	Page 1 of 1
Project Title/Work Order W-441, SNF-7229, Rev. 1		Date October 27, 2000
		EDT No. N/A
		ECN No. 663951 (663932)

[illegible]

Fike MCO Pressure Safety Element

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-3936
Revision 5

ECN 663932

Fike MCO Pressure Safety Element

Project No: W-441

Division: SNF

C. R. Miska
Fluor Hanford, Inc.

Date Published
October 2000

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Fluor Hanford
P.O. Box 1000
Richland, Washington

Gris Braden
Release Approval

11/1/00
Date

Release Stamp

SNF-3936
EWS

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Printed in the United States of America

Total Pages: 13

Commercial Grade Item Upgrade Dedication Form		SNF-3936, Rev. 5
ECN No. NA	CGI No. CGI-SNF-D-07-P4-044	Page 1 of 9
Title Fike MCO Pressure Safety Element		

Section 1 Part Information		
Item No.: N/A	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.: VPS-PSE-1*33	Specification No.: SNF-5303 (W-441-P4)	Manufacturer: Fike	Past P.O. No.: N/A
Procurement and/or Model No.: HOV-UT, 1", 316SS/TEF/316SS, 30PSI, 22°C, Standard MFG Tolerances, FU-1", 316SS	Equipment Supplier (if different from manufacturer): Olympic Tool and Engineering		Equip. Supplier's Part No.: N/A

Component Description: **This pressure safety element is a 1 inch rupture disc used to prevent an overpressure condition in the MCO. The pressure safety element is located at the MCO and discharges to the plant vent.**

Section 2b Qualified Vendor/Supplier Survey	
<p>1. Is the Item available from a catalogue from a qualified NQA1 supplier or ISO 9000 supplier (coordinate with project CGI interface Engineer or BTR)? ☐ YES (go to #2 below) ☒ NO (go to procedure step 6.3.2, proceed to dedicate item)</p> <p>If not available from a qualified NQA1 supplier, is it available from an ISO 9000 supplier? (coordinate w/ project CGI Interface Engineer or BTR):</p> <p>☐ YES (go to #2 below, procedure step 6.3.2, dedicate item) ☒ NO (procedure step 6.3.2, dedicate item)</p>	
<p>2. List of Candidate qualified suppliers or ISO 9000 suppliers: N/A</p>	
<p>3. Recommended Procurement Strategy (coordinate with project CGI interface Engineer or BTR): N/A</p>	

Section 2c CGI Determination	
CGI Determination Questions:	
#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: Is the Item used in applications other than nuclear facilities or activities?	☐ NO (the item is not commercial grade) ☒ YES (continue)
#3: Is the Item ordered from manufacturer/supplier on the basis of specifications set forth in the manufacturer's catalog?	☐ NO (the item is not commercial grade) ☒ YES (continue)
[X] All three criteria have been satisfied. The Item meets the definition of commercial grade.	

Section 2d Reason for Dedication	
The above Commercial Grade (CG) described Item is being Dedicated for use in the application cited for the following reason(s):	
X	Item is being purchased from a non-ESL manufacturer supplier as CG to be used in a Safety Class application.
	Item is being purchased from a non-ESL manufacturer supplier as CG to be used in a Safety Significant application.
	Item was purchased from a non-ESL manufacturer supplier as CG to be used in a Safety Class application.
	Item was purchased from a non-ESL manufacturer supplier as CG to be used in a Safety Significant application.
	Other ('like-for-like', similar, substitution, replacement evaluation)

Commercial Grade Item Upgrade Dedication Form		SNF-3936, Rev. 5
ECN No. NA	CGI No. CGI-SNF-D-07-P4-044	Page 2 of 9
Title Fike MCO Pressure Safety Element		

Section 3 Failure Effects Evaluation		
A. Part/Component Safety Function:		
1. Maintains pressure boundary, prevents helium leakage from MCO or air leakage into MCO during vacuum operation, H2 explosion.		
2. Prevents MCO over pressure, prevents thermal runaway		
3. Maintain critical function before and after seismic event.		
B. Part/Component Functional Mode:		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
Safety Function #1: ☐ Active ☒ Passive		
Safety Function #2: ☒ Active ☐ Passive		
Safety Function #3: ☐ Active ☒ Passive		
C. Host Component Safety Function (if applicable): N/A		
1.		
D. Failure Mechanisms(s) and the effects on component or system safety function (see worksheet 1):		
1. Failure of the disc to rupture at its nominal burst pressure.		
2. Fracture of the disc housing or piping attachment.		
3. Disc ruptures or leaks at a lower pressure than its nominal burst pressure.		
4. Upon actuation of rupture disc, pieces of disc separate and block downstream flow path and/or check valve.		
Section 4 Environmental & Natural Phenomena Hazard Design		
Environmental Qualification Required:		If yes: Environmental Qualification Requirements
Yes ☐		Limiting Environmental Conditions:
No ☒		Required Safety Functions:
Environmental Condition B		Qualification Period:
Natural Phenomena Hazard (NPH) Design Required:		If yes: NPH Design Requirements
Yes ☒		Performance Category: PC-3
No ☐		NPH Design Req'ts.: Seismic Condition A
HNF-PRO-97		Required Safety Functions: Disc ruptures to relieve overpressure in the MCO. Pressure Boundary Integrity.
SNF-5303		
Section 5 Component Functional Classification		
☒ Safety Class (SC)	☐ General Service (GS)	☐ Safety Significant (SS)
If part/component classification is different from host component/system, document basis. N/A		
Sections 6 and 7 [reserved]		
Section 8 References (for Functional Classification)		
National Codes/Standards: ASME B31.3		
Safety Analysis Report (SAR): HNF- 3553, Annex B		
Drawings: H-1-84010, HNF-SD-SNF-SEL-002		
Vendor Manual/Manufacturer/Supplier Information: Fike Rupture Disc Application, Selection, and Specification, HOV Series		

Commercial Grade Item Upgrade Dedication Form		SNF-3936, Rev. 5
ECN No. NA	CGI No. CGI-SNF-D-07-P4-044	Page 3 of 9
Title Fike MCO Pressure Safety Element		

Section 9 Critical Characteristics				
Critical Characteristics	Acceptance Criteria/Tolerances	Acc. Method	ID	Function
1. Item Identification Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
Component Number-Procedure and/or Model Number	HOV-UT, 1", 316SS/TEF/316SS, 30 PSI, 22°C, Standard MFG. Tolerance, FU-1", 316SS, (Per SNF-5303, Section H, Design Data Sheet)	1, IN	X	
Manufacturer	Fike	1, IN	X	
Process Connection	1 Inch Butt Weld	1, IN	X	
2. Physical Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
Material, Housing	Stainless Steel (Note 4)	1, IN, 1, T	X	
Material, Process Connection	Stainless Steel (Note 4)	1, IN, 1, T	X	
Material, Rupture Disc	Teflon (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	No leakage at test pressure of 165 psig for >10 minutes. (Note 3)	1, T		X
Internal Pressure	150 psig and Full Vacuum	1, T		X
Leakage Past Rupture Disc	Pressure Test to 15 psig, leakage to bubble tight standards <10-3 ml/sec (Note 5)	1, T		X
Rupture Disc Burst Pressure	Verify that the disc bursts within ± 2 psig of the stamped burst pressure.	1, T		X
Stamped Burst Pressure	Verify Stamped Burst Pressure is within manufacturing range of +10% to -8% of 30 psig. (27.6 psig- 33.0 psig.) Note 6	1, IN		X
Inspect Disc after Rupture	No loose pieces from ruptured disc.	1, IN		X
Environmental	Note 1			
Seismic Condition A	Note 2	1, T		X

Commercial Grade Item Upgrade Dedication Form		SNF-3936, Rev. 5
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-07-P4-044</u>	Page 4 of 9
Title: <u>Fike MCO Pressure Safety Element</u>		

4. Notes and Legend:

1. The pressure safety element and rupture disc are not subject to degradation at environmental conditions of 40F and 60% RH or 115°F and 22% RH and are suitable for Condition B application.
2. Maintain critical function before and after Seismic event. SNF-5303, Appendix L, page L-20 provides a seismic testing plan for this safety class, Seismic Condition A component at a Seismic Spectra SNF-4896. 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.
3. Pressurize both sides to prevent disk from rupturing.
4. Material verification acceptance method may be by either inspection or test.
5. During test - do not wet rupture disc (with wetting solution, e.g. Snoop type soap solution).
6. The rupture disc Standard Manufacturing burst range is +16% to -8% of 30 psig. (27.6 psig- 34.8 psig). To satisfy the TSR maximum burst pressure limit of 35 psig, the manufacturing range was tightened to +10% to -8% of 30 psig. (27.6 psig - 33 psig)

Acceptance Method.

1. Special Test and Inspection
1,IN for Inspection
1,T for Test
2. Commercial Grade Survey
3. Source Verification
4. Vendor/Item History

Rev. 2: Rev'd temperature rating of disc to 22C from 150C. New forms.

Rev. 3: Updated reference documentation.

Rev. 4: Per OTE NCR # 5422 Disposition: revised Rupture Disc Burst Pressure from Nominal 32 psig $\pm$ 2 psig to Nominal 32 + 2 / - 4 psig

Rev. 5: Revised Burst Pressure to $\pm$ 2 psig of Stamped Burst Pressure. Added Stamped Burst Pressure Verification. Changed Acceptance Method for Inspect Disc after Rupture from 1,T to 1,IN.

Section 10 Initial Reviews and Approvals

Approvals:

Designated Engineer: Carl Van Katwijk 10/31/00

Design Authority: [Signature] 10/31/00

QA Engineer: [Signature] 10/31/00

Other:

Commercial Grade Item Upgrade Dedication Form		SNF-3936, Rev. 5
ECN No. NA	CGI No. CGI-SNF-D-07-P4-044	Page 5 of 9
Title: Fike MCO Pressure Safety Element		

WORKSHEET 1
DETERMINATION OF FAILURE MECHANISMS

Section 1			
Typical Failure Mechanisms	Definition	X = Applicable to Component under Evaluation X?	Indicate Failure Mode
Fracture	Separation of a solid accompanied by little or no macroscopic plastic deformation.		
Corrosion	The gradual deterioration of a material due to chemical or electrochemical reactions, such as oxidation, between the material and its environment.		
Erosion	Destruction of materials by the abrasive action of moving fluids, usually accelerated by the presence of solid particles carried with the fluid.		
Open Circuit	An electrical circuit that is unintentionally broken so that there is no complete path for current flow.		
Short Circuit	An abnormal connection by which an electrical current is connected to ground, or to some conducting body, resulting in excessive current flow.		
Blockage	Clogging of a filtering medium resulting in the inability to perform its purification function or blockage of flow.		
Seizure	Binding of a normally moving item through excessive pressure, temperature, friction, jamming.		
Unacceptable Vibration	Mechanical oscillations produced are beyond the defined permissible limits due to unbalancing, poor support, or rotation at critical speeds.		
Loss of Properties	A loss of mechanical and physical properties of a material due to exposure to high temperatures, radiation exposure.		
Excess Strain	Under the action of excessive external forces the material of the part has been deformed or distorted.		
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.		
Ductile Fracture	Fracture characterized by tearing of metal accompanied by appreciable gross plastic deformation.		
Section 2 Additional Failure Modes Applicable to the Component Under Evaluation			
1. Failure of the disc to rupture at its nominal burst pressure.			
2. Fracture of the disc housing or piping attachment.			
3. Disc ruptures at a lower pressure than its nominal burst pressure.			
4. Disk ruptures at burst pressure and fragments potentially block downstream equipment.			
5. Leakage past rupture disc in disc holder.			

Commercial Grade Item Upgrade Dedication Form		SNF-3936, Rev. 5
ECN No. NA	CGI No. CGI-SNF-D-07-P4-044	Page 6 of 9
Title Fike MCO Pressure Safety Element		

Checklist 1 - Acceptance Method 1 - Special Test/Inspection Verification

SECTION 1	
Item Description: MCO Pressure Safety Element System #: 07	Equip #: VPS- PSE-1*33 Procurement and/or Model #: HOV-UT, 1", 316SS/TEF/316SS, 30 PSI, 22°C, Standard MFG Tolerance, FU-1", 316SS
Manufacturer (Address/Phone): Fike Company P.O. #	Supplier (Address/Phone):

SECTION 2 CRITICAL CHARACTERISTICS TO BE VERIFIED BY METHOD 1			
Insp	Test	Post-Test	
X			1. Component Number-Procurement and/ or Model Number
X			2. Nameplate - Manufacturer
X			3. Process Connection
X	X		4. Material, Rupture Disc (Verification may be by either inspection or test)
X	X		5. Material, Housing (Verification may be by either inspection or test)
X	X		6. Material, Process Connection (Verification may be by either inspection or test)
	X		7. Pressure Boundary Integrity
	X		8. Internal Pressure
	X		9. Leakage, Rupture Disc
	X		10. Rupture Disc Burst Pressure
X			11. Stamped Burst Pressure
X			12. Inspect Disc after Rupture
	X		13. Seismic Condition A

SECTION 3 BY INSPECTION * See Appendix D, Table D-1, of Administrative Procedure EN-06-035-01 for Sampling Size; References (See Section 7)	
Characteristic: Manufacturer Acceptance Criteria: Fike Receipt Inspection Plan / Report #:	Sample Size*: 100%
Characteristic: Component Number-Procurement and/ or Model Number Acceptance Criteria: HOV-UT, 1", 316SS/TEF/316SS/ 30 PSI, 22°C, Standard MFG Tolerance, FU-1", 316SS, (Per SNF-5303, Section H, Design Data Sheet) Receipt Inspection Plan / Report #:	Sample Size*: 100%
Characteristic: Process Connection Acceptance Criteria: 1 Inch Butt Weld Receipt Inspection Plan / Report #:	Sample Size*: 100%
Characteristic: Material, Housing Acceptance Criteria: Stainless Steel Receipt Inspection Plan / Report #:	Sample Size*: 100%

Commercial Grade Item Upgrade Dedication Form		SNF-3936, Rev. 5
ECN No. NA	CGI No. CGI-SNF-D-07-P4-044	Page 7 of 9
Title: Fike MCO Pressure Safety Element		

Characteristic: Material, Process Connection Acceptance Criteria: Stainless Steel Receipt Inspection Plan / Report #:	Sample Size* 100%
Characteristic: Material, Rupture Disc Acceptance Criteria: Teflon Sample Size*: This is a destructive test since the disc may suffer damage during test for testing. Utilize the disc that has been ruptured for the burst pressure test to test the material. Test only one item. Receipt Inspection Plan / Report #:	Sample Size* One Item
Section 4 By Special Test * See Appendix D, Table D-1, of Administrative Procedure EN-6-035-01 for Sampling Size, References (See Section 7)	
Characteristic for Test: Pressure Boundary Integrity Acceptance Criteria: Pressure Test at 165 psig for >10 minutes; Reduce pressure to 100%, perform snoop test(No Leakage-No Bubbles) Actual Test Value:	Samp Size*: ☒ Normal ☐ Reduced ☐ Tightened Test Plan and Report #:
Characteristic for Test: Internal Pressure Acceptance Criteria: 150 psig and full vacuum Actual Test Value:	Samp Size*: ☒ Normal ☐ Reduced ☐ Tightened Test Plan and Report #:
Characteristic for Test: Leakage Past Rupture Disc Acceptance Criteria: At 15 psig, leakage to bubble type standards <10⁻³ ml/sec (do not wet disc with liquid solution, e.g. Snoop). Actual Test Value:	Samp Size*: ☒ Normal ☐ Reduced ☐ Tightened Test Plan and Report #:
Characteristic for Test: Rupture Disc Burst Pressure Acceptance Criteria: Verify that the disc bursts within ± 2 psig of Stamped Burst Pressure Sample Size*: Destructively Test Only One Item. After burst, use this disc for material test and loose pieces examination. Actual Test Value:	Test Plan and Report #:
Characteristic for Test: Verify Stamped Burst Pressure is within manufacturing range of +10% to -8% of 30 psig. Acceptance Criteria: 27.6 psig- 33.0 psig Sample Size*: All Actual Test Value:	Test Plan and Report #:
Characteristic for Test: Inspect Disc after Rupture Acceptance Criteria: No loose pieces from ruptured disc. Sample Size*: Destructively test only one item. Examine the disc used for the burst pressure test. Actual Test Value:	Test Plan and Report #:
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 #:

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

Commercial Grade Item Upgrade Dedication Form		SNF-3936, Rev. 5
ECN No. NA	CGI No. CGI-SNF-D-07-P4-044	Page 8 of 9
Title Fike MCO Pressure Safety Element		

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/A/N	Procedure or RR#	Check-List ID	Number Tested	Number Failed	Verifying Organization	Printed Name Signature	Date
Component Number-Procurement and/or Model Number	HOV-JT, 1", 316SS/TEF/316SS, 30 PSI, 22°C, Standard MFG. Tolerances, FU-1", 316SS, (Per SNF-5303, Section G, Design Data Sheet)	X		1, IN							
Manufacturer	Fike	X		1, IN							
Process Connection	1 Inch Butt Weld	X		1, IN							
Material, Rupture Disc	Teflon	X		1, IN							
Material, Housing	Stainless Steel	X		1, IN							
Material, Process Connection	Stainless Steel	X		1, IN							
Pressure Boundary Integrity	No Leakage at Test Pressure of 165 psig for >10 minutes.		X	1, T							
Internal Pressure	150 psig and full vacuum		X	1, T							
Leakage Past Rupture Disc	Pressure Test to 15 psig, leakage to bubble tight standards <10-3 ml/sec		X	1, T							
Rupture Disc Burst Pressure	Verify that the disc bursts within ± 2 psig of Stamped Burst Pressure.		X	1, T							
Stamped Burst Pressure	Verify Stamped Burst Pressure is within manufacturing range of +10% to -8% of 30 psig. (27.6 psig- 33.0 psig)		X	1, IN							
Inspect Disc after Rupture	No loose pieces from ruptured disc.		X	1, IN							
Seismic Condition A	Maintain Critical Function Before and After Seismic Event.		X	1, T							

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	Design Authority:	Date
Testing Agency QA Engineer:	Date	QA Engineer:	Date

Commercial Grade Item Upgrade Dedication Form		SNF-3936, Rev. 5
ECN No. NA	CGI No. CGI-SNF-D-07-P4-044	Page 9 of 9
Title: Fike MCO Pressure Safety Element		

Section 6 Contacts / Phone Numbers		
Title	Name	Phone
Design Authority		
QA		
QC		
Cog - Engineer		
CGI Engineer	Larry Price	372-8770
Procurement Engineer		
Other		
Section 7 Supporting Documentation for This Checklist		
Initial Procurement Documents		For Critical Characteristics
☐	Drawings:	
☐	Manuals (specify type & number):	
☐	Design Calculations	
☐	Installation Instructions	
☐	Operation Instructions	
☐	Calibration Instructions	
☐	Manufacturer's Recommended Spare Parts List	
☒	Other: : Catalog Cut Sheets - Fike	All
Procurement Documents		
☐	Certificate of Conformance/Compliance	
☐	Seismic Qualification Certificate	
☐	Environmental Qualification Certificate	
☐	Test Report (s):	
☐	Inspection Report (s):	
☐	CMTRs for ASME Pressure Retaining Materials	
☐	Valve Seat Leakage Report	
☐	Weld Records	
☐	Material Traceability Record	
☐	Other:	