S

ENGINEERING CHANGE NOTICE

Page 1 of 21. ECN **664023**Proj.
ECN

2. ECN Category (mark one)		3. Originator's Name, Organization, MSIN, and Telephone No.		4. USQ Required?		5. Date	
Supplemental ☐ Direct Revision ☒ Change ECN ☐ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐		A. Artzer, CVDF, X3-78, 372-2785		[X] Yes ☐ No		12/20/00	
		6. Project Title/No./Work Order No.		7. Bldg./Sys./Fac. No.		8. Approval Designator	
		SNF/W-441, Spent Nuclear Fuel Cold Vacuum Drying		CVDF 142K		S ^N Q	
		9. Document Numbers Changed by this ECN (includes sheet no. and rev.)		10. Related ECN No(s).		11. Related PO No.	
		SNF-3922, Rev. 2		N/A		N/A	
12a. Modification Work		12b. Work Package No.		12c. Modification Work Complete		12d. Restored to Original Condition (Temp. or Standby ECN only)	
☐ Yes (fill out Blk. 12b) ☒ No (NA Blks. 12b, 12c, 12d)		N/A		N/A		N/A	
		Design Authority/Cog. Engineer Signature & Date		Design Authority/Cog. Engineer Signature & Date			
13a. Description of Change				13b. Design Baseline Document? ☐ Yes ☒ No			
SCHe				SC			
Revised Note 2 to indicate that the pressure test is a non-destructive pressure test. Identified equipment Supplier <i>ana 12/21/00</i>							
USQ Approval: <u>CVD-00-2581</u>							
14a. Justification (mark one)				14b. Justification Details			
Criteria Change ☐ Design Improvement ☐ Environmental ☐ Facility Deactivation ☐ As-Found ☒ Facilitate Const ☐ Const. Error/Omission ☐ Design Error/Omission ☐				Per OTE RFI HE-073, the pressure test is non-destructive. 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)						RELEASE STAMP	
See distribution sheet.							

ENGINEERING CHANGE NOTICE				Page 2 of 2	1. ECN (use no. from pg. 1) 664023																																					
16. Design Verification Required ☒ Yes ☐ No	17. Cost Impact <table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">ENGINEERING</th> <th colspan="2" style="text-align: center;">CONSTRUCTION</th> </tr> <tr> <td style="width: 15%;">Additional</td> <td style="width: 15%;">[N/A]</td> <td style="width: 15%;">\$</td> <td style="width: 15%;">Additional</td> </tr> <tr> <td></td> <td>[N/A]</td> <td>\$</td> <td></td> </tr> <tr> <td>Savings</td> <td>[N/A]</td> <td>\$</td> <td>Savings</td> </tr> <tr> <td></td> <td>[N/A]</td> <td>\$</td> <td></td> </tr> </table>			ENGINEERING		CONSTRUCTION		Additional	[N/A]	\$	Additional		[N/A]	\$		Savings	[N/A]	\$	Savings		[N/A]	\$		18. Schedule Impact (days) Improvement [N/A] Delay [N/A]																		
ENGINEERING		CONSTRUCTION																																								
Additional	[N/A]	\$	Additional																																							
	[N/A]	\$																																								
Savings	[N/A]	\$	Savings																																							
	[N/A]	\$																																								
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 ☐ IEPD 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 ☐ Ticker 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.																																										
Document Number/Revision	Document Number/Revision	Document Number/Revision																																								
N/A																																										
21. Approvals																																										
<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;">Signature</th> <th style="width: 15%;">Date</th> </tr> <tr> <td>Design Authority C. Miska <i>C. Miska</i></td> <td><u>12/20/00</u></td> </tr> <tr> <td>Cog. Eng. N/A</td> <td></td> </tr> <tr> <td>Cog. Mgr. C. Haller <i>C. Haller</i></td> <td><u>12/21/00</u></td> </tr> <tr> <td>QA R. K. Ramsgate <i>R. K. Ramsgate</i></td> <td><u>12/20/00</u></td> </tr> <tr> <td>Safety J. R. Brehm <i>J. R. Brehm</i></td> <td><u>12/21/00</u></td> </tr> <tr> <td>Independent Review E.L. Stricker <i>E.L. Stricker</i></td> <td><u>12/20/00</u></td> </tr> <tr> <td>Operations <i>H. C. C.</i></td> <td><u>12/28/00</u></td> </tr> <tr> <td>Other</td> <td></td> </tr> </table>	Signature	Date	Design Authority C. Miska <i>C. Miska</i>	<u>12/20/00</u>	Cog. Eng. N/A		Cog. Mgr. C. Haller <i>C. Haller</i>	<u>12/21/00</u>	QA R. K. Ramsgate <i>R. K. Ramsgate</i>	<u>12/20/00</u>	Safety J. R. Brehm <i>J. R. Brehm</i>	<u>12/21/00</u>	Independent Review E.L. Stricker <i>E.L. Stricker</i>	<u>12/20/00</u>	Operations <i>H. C. C.</i>	<u>12/28/00</u>	Other		Design Agent PE QA Safety Design Environ. Other	<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;">Signature</th> <th style="width: 15%;">Date</th> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>	Signature	Date																				
Signature	Date																																									
Design Authority C. Miska <i>C. Miska</i>	<u>12/20/00</u>																																									
Cog. Eng. N/A																																										
Cog. Mgr. C. Haller <i>C. Haller</i>	<u>12/21/00</u>																																									
QA R. K. Ramsgate <i>R. K. Ramsgate</i>	<u>12/20/00</u>																																									
Safety J. R. Brehm <i>J. R. Brehm</i>	<u>12/21/00</u>																																									
Independent Review E.L. Stricker <i>E.L. Stricker</i>	<u>12/20/00</u>																																									
Operations <i>H. C. C.</i>	<u>12/28/00</u>																																									
Other																																										
Signature	Date																																									
DEPARTMENT OF ENERGY Signature or a Control Number that tracks the Approval Signature ADDITIONAL																																										

DISTRIBUTION SHEET

To	From	Page 1 of 1
Distribution	W-441 (CVDF)	Date 12/07/00
Project Title/Work Order		EDT No. N/A
W-441, CGI Package C1-092		ECN No. 664016 664023

[illegible]

Krohne Flow Indicator & High Flow Alarm-Local Indication & High Flow Alarm of Helium Flow from the SCHe Purge Lines C & D to the Process Vent

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

SNF3922
Revision 3

ECN 664023

Krohne Flow Indicator & High Flow Alarm-Local Indication & High Flow Alarm of Helium Flow from the SCHe Purge Lines C & D to the Process Vent

Project No: W-441

Document Type: RPT

Division: SNF

C. R. Miska
Fluor Hanford, Inc.

Date Published
December 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

Chris Braden
Release Approval

12/28/00
Date

Release Stamp

SNF-39-22
Rw 3

TRADEMARK DISCLAIMER

Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

Total Pages: 14

Page 1

Change Control Record

A-7320-005 (10/97)

Commercial Grade Item Upgrade Dedication Form

SNF-3922, Rev. 3

ECN No. **NA**

CGI No. **CGI-SNF-D-13-P5-025**

Page 1 of 10

Title: **KROHNE FLOW INDICATOR AND HIGH FLOW ALARM –
LOCAL INDICATION AND HIGH FLOW ALARM OF HELIUM FLOW
FROM THE SCHe PURGE LINES C & D TO THE PROCESS VENT**

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.: PV-FI/FSH-5*52, -5*72	Specification No.: SNF-5304 (W-441-P5)	Manufacturer: Krohne	Past P.O. No.: NA
Procurement and/or Model No.: DK 37/MR K200 W/120 VAC Relay W/O Needle Valve	Equipment Supplier (if different from manufacturer): Olympic Tool and Engineering		Equip. Supplier's Part No.: NA

Component Description: **Flow Indicators/alarms FI/FSH-5*52 and -5*72 are located in the process vent lines connected to the 2 psig SCHe purge lines C and D. They monitor the flow from the 2 psig SCHe purge going to the process vent. The switch/alarm is non-safety class GS.**

Section 2b Qualified Vendor/Supplier Survey

- 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.)
- List of Candidate qualified suppliers or ISO 9000 suppliers

company name and type	contact name	phone
NA		
- Recommended Procurement Strategy (coordinate with project CGI interface Engineer or BTR):
NA

Section 2c CGI Determination

- 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)

Commercial Grade Item Upgrade Dedication Form

SNF-3922, Rev. 3

ECN No. NA

CGI No. CGI-SNF-D-13-P5-025

Page 2 of 10

Title: **KROHNE FLOW INDICATOR AND HIGH FLOW ALARM –
LOCAL INDICATION AND HIGH FLOW ALARM OF HELIUM FLOW
FROM THE SCHe PURGE LINES C & D TO THE PROCESS VENT**

2. Question #2: Is the Item used in applications other than nuclear facilities or activities?

☐ NO (the item is not commercial grade)

☒ YES (continue)

3. Question #3: Is the Item ordered from manufacturer/supplier on the basis of 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. **Pressure Boundary Integrity– Prevents helium leakage from the 2 psig SCHe System.**

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

Safety Function #2:

☐ 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 #3:

☐ 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.

Commercial Grade Item Upgrade Dedication Form

SNF-3922, Rev. 3

ECN No. **NA**

CGI No. **CGI-SNF-D-13-P5-025**

Page 3 of 10

Title: **KROHNE FLOW INDICATOR AND HIGH FLOW ALARM -
LOCAL INDICATION AND HIGH FLOW ALARM OF HELIUM FLOW
FROM THE SCHe PURGE LINES C & D TO THE PROCESS VENT**

D. Failure Mechanisms(s) and the effects on component or system safety function (see worksheet 1):

1. **Fracture of the indicator body or of the piping connection - helium leakage from the 2 psig SCHe System.**

Section 4 Environmental & Natural Phenomena Hazard Design

Environmental Qualification Required:

Yes ☐

No ☒

Environmental Condition A

If yes: Environmental Qualification Requirements

Limiting Environmental Conditions:

Required Safety Functions:

Qualification Period:

Natural Phenomena Hazard (NPH) Design Required:

Yes ☐

No ☒

HNF-PRO-97

SNF-5304

If yes: NPH Design Requirements

Performance Category: **PC-2**

NPH Design Req'ts.: **None**

Required Safety Functions: **Pressure Boundary Integrity.**

Section 5 Component Functional Classification

☐ Safety Class (SC)

☐ General Service

☒ Safety Significant (SS)

If part/component classification is different from host component/system, document basis.

The flow indicator is pressure boundary Safety Significant (SS).

The switch/alarm electronic output signal is General Service (GS).

Section 6 [reserved]

Section 7 [reserved]

Section 8 References (for Functional Classification)

National Codes/Standards: **IEEE 344,
ISA-S5.1, -S5.4, -S18.1, -S20**

Safety Analysis Report (SAR):
HNF-SD-SNF-SAR-002

Drawings: **H-1-82165
HNF-SD-SNF-SEL-002
CVDF-SSD-003**

Vendor Manuals/Manufacturer/Supplier Information: **Krohne Product Survey - Variable Area Flowmeters**

Other:

Commercial Grade Item Upgrade Dedication Form

SNF-3922, Rev. 3

ECN No. **NA**

CGI No. **CGI-SNF-D-13-P5-025**

Page 4 of 10

Title: **KROHNE FLOW INDICATOR AND HIGH FLOW ALARM –
LOCAL INDICATION AND HIGH FLOW ALARM OF HELIUM FLOW
FROM THE SCHe PURGE LINES C & D TO THE PROCESS VENT**

Section 9 Critical Characteristics				
Critical Characteristics	Acceptance Criteria/Tolerances	Acceptance Method	ID	Function
Verification Document: Vendor Specifications, HNF-SD-SNF-SEL-002				
1. Item Identification Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
Component Number-Procurement and/or Model Number	DK 37/MR K200 W/120 VAC Relay W/O Needle Valve. (Per SNF-5304, Section G, Design Data Sheet)	1,IN	X	
Nameplate - Manufacturer	Krohne	1,IN	X	
Process Connection	1/4 Inch FNPT (Horizontal Connections)	1,IN	X	
Indicator Range	0.34 - 3.4 SCFM	1,IN	X	
2. Physical Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
Material, Body	Stainless Steel (Note 3)	1, IN 1,T	X	
Material, Process Connection	Stainless Steel (Note 3)	1, IN 1,T	X	
3. Performance Critical Characteristics (necessary & sufficient for reasonable assurance that the Item will perform its intended safety function(s))				
Pressure Boundary Integrity	No Leakage at Test Pressure of 165 psig (No Bubbles) Note 2	1,T		X
Environmental	Note 1			
Seismic Condition	None			
4. Notes and Legend:		Acceptance Method:		
<p>1. The flow indicator is not subject to degradation at ambient conditions of 60°F and 40% RH or 75°F and 25% RH and is suitable for Environmental Condition A application.</p> <p>2. Pressure test at 110% of system design pressure of 150 psig. This is considered a non-destructive test because the manufactures pressure rating significantly exceeds this test pressure.</p> <p>3. Material verification acceptance method may be by either inspection or test.</p> <p>Rev. 2: Updated reference documentation.</p> <p>Rev. 3: Revised note 2 to indicate that the pressure test is a non-destructive pressure test per OTE RFI HE-073.</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 Reviews and Approvals				
<p>Approvals: <i>Ana Perlecom</i></p> <p>Designated Engineer: <i>to Paul Van Katwijk 12/21/00</i></p> <p>Design Authority: <i>[Signature] 12/20/00</i></p> <p>QA Engineer: <i>[Signature] 12/20/00</i></p>				

Commercial Grade Item Upgrade Dedication Form

SNF-3922, Rev. 3

ECN No. **NA**

CGI No. **CGI-SNF-D-13-P5-025**

Page 5 of 10

Title: **KROHNE FLOW INDICATOR AND HIGH FLOW ALARM --
LOCAL INDICATION AND HIGH FLOW ALARM OF HELIUM FLOW
FROM THE SCHe PURGE LINES C & D TO THE PROCESS VENT**

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 ☐ ; If Yes, indicate failure Mode. Failure of Transmitter Body or the Process Connection
Corrosion	The gradual deterioration of a material due to chemical or electrochemical reactions, such as oxidation, between the material and its environment.	Yes ☐ No ☒ ; 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 ☒ ; 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 ☒ ; 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 ☒ ; 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 ☒ ; If Yes, indicate failure Mode. _____
Seizure	Binding of a normally moving item through excessive pressure, temperature, friction, jamming.	Yes ☐ No ☒ ; 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 ☒ ; 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 ☒ ; 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 ☒ ; 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 ☒ ; If Yes, indicate failure Mode. _____
Ductile Fracture	Fracture characterized by tearing of metal accompanied by appreciable gross plastic deformation.	Yes ☐ No ☒ ; If Yes, indicate failure Mode. _____

SECTION 2 Additional Failure Modes Applicable to the Component Under Evaluation

1. **Process Connection/Body Break**

2. _____

Commercial Grade Item Upgrade Dedication Form

SNF-3922, Rev. 3

BCN No. NA

CGI No. CGI-SNF-D-13-P5-025

Page 6 of 10

Title: **KROHNE FLOW INDICATOR AND HIGH FLOW ALARM –
LOCAL INDICATION AND HIGH FLOW ALARM OF HELIUM FLOW
FROM THE SCHe PURGE LINES C & D TO THE PROCESS VENT**

CHECKLIST 1

ACCEPTANCE METHOD 1

SPECIAL TEST/INSPECTION VERIFICATION

SECTION 1

Item Description: **Krohne Local Flow
Indicator/Alarm – 2 PSIG
SCHe System to Process
Vent**

Equip #: **PV-FI/FSH-5*52, -5*72**

Procurement and/or Model #: **DK 37/MR K200
W/120 VAC Relay W/O Needle Valve**

System #: **13**

Manufacturer (Address/Phone):

Krohne

Supplier (Address/Phone):

P.O. #

SECTION 2 CRITICAL CHARACTERISTICS TO BE VERIFIED BY METHOD 1.

Inspe	Test	Post- Test	
☒	☐	☐	1. Component Number-Procurement and/or Model Number
☒	☐	☐	2. Nameplate - Manufacturer
☒	☐	☐	3. Process Connection
☒	☐	☐	4. Indicator Range
☒	☒	☐	5. Material, Body (Verification may be by either inspection or test)
☒	☒	☐	6. Material, Process Connection (Verification may be by either inspection or test)
☐	☒	☐	7. Pressure Boundary Integrity

SECTION 3 BY INSPECTION

* See Attachment G of Desk Instruction for Sampling Size

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

Sample Size*: **All Items**

Acceptance Criteria: **DK 37/MR K200 W/120 VAC Relay W/O Needle Valve**

Receipt Inspection Plan / Report #: _____

References (see Section 7): **Krohne Product Survey - Variable Area
Flowmeters**

Characteristic: **Nameplate - Manufacturer**

Sample Size*: **All Items**

Acceptance Criteria: **Krohne**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

Commercial Grade Item Upgrade Dedication Form

SNF-3922, Rev. 3

ECN No. NA CGI No. CGI-SNF-D-13-P5-025
 Title: KROHNE FLOW INDICATOR AND HIGH FLOW ALARM –
LOCAL INDICATION AND HIGH FLOW ALARM OF HELIUM FLOW
FROM THE SCHe PURGE LINES C & D TO THE PROCESS VENT

Page 7 of 10

Characteristic: **Process Connection**

Sample Size*: **All Items**

Acceptance Criteria: **1/4 Inch FNPT (Horizontal Connections)**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

Characteristic: **Indicator Range**

Sample Size*: **All Items**

Acceptance Criteria: **0.34 - 3.4 SCFM**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

Characteristic: **Material, Body**

Sample Size*: **Normal Sampling Size**

Acceptance Criteria: **Stainless Steel**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

Characteristic: **Material, Process Connection**

Sample Size*: **Normal Sampling Size**

Acceptance Criteria: **Stainless Steel**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

SECTION 4 BY SPECIAL TEST

* See Attachment G of Desk Instruction for Sampling Size

Test To Be Performed by:

☐ Purchaser

☐ Supplier/Manufacturer**

☐ Other

Number of Items to be Tested:

Test/Inspection Location:

Characteristic for Test: **Pressure Boundary Integrity**

Acceptance Criteria: **No Leakage at Test Pressure of 165 psig (No Bubbles)**

Sample Size*: **Normal Sample Size**

Actual Test Value:

Test Plan and Report #: _____ References (see Section 7): _____

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

Commercial Grade Item Upgrade Dedication Form

SNF-3922, Rev. 3

ECN No. NA CGI No. CGI-SNF-D-13-P5-025

Page 8 of 10

Title: **KROHNE FLOW INDICATOR AND HIGH FLOW ALARM -
LOCAL INDICATION AND HIGH FLOW ALARM OF HELIUM FLOW
FROM THE SCHe PURGE LINES C & D TO THE PROCESS VENT**

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
Component Number- Procurement and/or Model Number	DK 37/MR K200 W/120 VAC Relay W/O Needle Valve, (Per SNF-5304, Section G, Design Data Sheet	X									
Nameplate - Manufacturer	Krohne	X									
Process Connection	1/4 Inch FNPT (Horizontal Connections)	X									
Indicator Range	0.34 - 3.4 SCFM	X									
Material, Body	Stainless Steel		X								
Material, Process Connection	Stainless Steel		X								
Pressure Boundary Integrity	No Leakage at Test Pressure of 165 psig (No Bubbles)		X								

Commercial Grade Item Upgrade Dedication Form

SNF-3922, Rev. 3	
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-13-P5-025</u>
Page 9 of 10	
Title: <u>KROHNE FLOW INDICATOR AND HIGH FLOW ALARM -</u> <u>LOCAL INDICATION AND HIGH FLOW ALARM OF HELIUM FLOW</u> <u>FROM THE SCHe PURGE LINES C & D TO THE PROCESS VENT</u>	

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

SNF-3922, Rev. 3

ECN No. NA

CGI No. CGI-SNF-D-13-P5-025

Page 10 of 10

Title: **KROHNE FLOW INDICATOR AND HIGH FLOW ALARM –
LOCAL INDICATION AND HIGH FLOW ALARM OF HELIUM FLOW
FROM THE SCHe PURGE LINES C & D TO THE PROCESS VENT**

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
☐ Drawings:	
☐ Manuals (specify type & number):	
☐ Design Calculations	
☐ Installation Instructions	
☐ Operation Instructions	
☐ Calibration Instructions	
☐ Manufacturer's Recommended Spare Parts List	
☐ Other:	
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:	