

ENGINEERING CHANGE NOTICE

1. ECN 653776

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. Treah Nuxall, SNF CVD, R3-47, 372-3739	4. USQ Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Date 3/31/99	
	6. Project Title/No./Work Order No. Spent Nuclear Fuel Cold Vacuum Drying	7. Bldg./Sys./Fac. No. CVDF	8. Approval Designator Q, S"	
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) All Rev 0 SNF-3876, SNF-3877, SNF-3878, SNF-3879, SNF-3880, SNF-3881, SNF-3882, SNF-3883, SNF-3884, SNF-3886, SNF-3887, SNF-3888, SNF-3890, SNF-3891, SNF-3892, SNF-3893, SNF-3894, SNF-3895, SNF-3920, SNF-3921, SNF-3922, SNF-3923, SNF-3924, SNF-3925, SNF-3926, SNF-3927, SNF-3928, SNF-3929, SNF-3930, SNF-3931, SNF-3932, SNF-3933, SNF-3934, SNF-3935, SNF-3936	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
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13a. Description of Change
Revision to meet SEL, Rev. 6.

13b. Design Baseline Document? Yes No

14a. Justification (mark one)

Criteria Change <input checked="" type="checkbox"/>	Design Improvement <input 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
Revision to SEL.

15. Distribution (include name, MSIN, and no. of copies)
see attached distribution

RELEASE STAMP

DATE: **MAY 06 1999**

STA: *A*

MANFORD RELEASE

ID: *2.*

ENGINEERING CHANGE NOTICE

16. Design Verification Required <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	17. Cost Impact <table style="width: 100%; border: none;"> <tr> <th style="text-align: center; border: none;">ENGINEERING</th> <th style="text-align: center; border: none;">CONSTRUCTION</th> </tr> <tr> <td style="border: none;">Additional <input type="checkbox"/> \$</td> <td style="border: none;">Additional <input type="checkbox"/> \$</td> </tr> <tr> <td style="border: none;">Savings <input type="checkbox"/> \$</td> <td style="border: none;">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) 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"/>		<input type="checkbox"/>
Environmental Permit	<input type="checkbox"/>	Inventory Adjustment Request	<input type="checkbox"/>		<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
--------------------------	--------------------------	--------------------------

N/A

21. Approvals

	Signature	Date		Signature	Date
Design Authority	C. Miska <i>CR Miska</i>	4/27/99	Design Agent		
Designated Cog. Eng.	C. Van Katwijk <i>C. Van Katwijk</i>	4/27/99	PE		
Authorized Rep. Mgr.	T. Choho <i>T. Choho</i>	4/27/99	QA		
QA	T. D. Hays <i>T. D. Hays</i>	4/27/99	Safety		
Other	R. W. Behr <i>R. W. Behr</i>	4/27/99	Design		
Safety (Nuclear)	J. G. Brehm <i>J. G. Brehm</i>	5/4/99	Environ.		
			Other		

DEPARTMENT OF ENERGY
Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

ASHCROFT PRESSURE SWITCH - MONITOR FOR LOW SCHe PURGE PRESSURE

Carl Van Katwijk
Numatec Hanford, Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200


EDT/ECN: ~~626879~~ 653776 UC: 620
Org Code: 2G300 Charge Code: 105559/A000
B&R Code: 39EW40400 Total Pages: 14

Key Words: Ashcroft Pressure Switch - Monitor for Low SCHe Purge Pressure

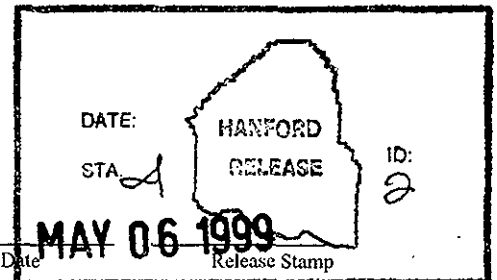
Abstract: Ashcroft Pressure Switch - Monitor for Low SCHe Purge Pressure

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Release Approval

5/6/99
Date



Approved for Public Release

RECORD OF REVISION

(1) Document Number
SNF-3928

Page 1

(2) Title
ASHCROFT PRESSURE SWITCH-MONITOR FOR LOW SCHe PURGE PRESSURE

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 RS	(7) REVISION TO MEET SEL REV. 6, ECN 653776			5/6/99

Commercial Grade Item Upgrade Dedication Form

SNF-3928, Rev. 1

ECN No. NA CGI No. CGI-SNF-D-13-P5-031

Page 1 of 12

Title: ASHCROFT PRESSURE SWITCH – MONITOR FOR LOW SCHe
PURGE PRESSURE

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-PSL-5*06, 5*25, 5*45, 5*65	Specification No.: W-441-P5, Rev. 2	Manufacturer: Ashcroft Instrument Division	Past P.O. No.: NA
Procurement and/or Model No.: LPS-N4-K-S-25-15 PSI.	Equipment Supplier (if different from manufacturer): TBD		Equip. Supplier's Part No.: NA

Component Description: **These 0-15 psig pressure switches are located in the SCHe helium purge lines after PCV-5*23 and before PCV-5*27. The pressure switches monitor the pressure being maintained between the two PCVs and actuate on low pressure of 7.5 psig. This design is used for each of the SCHe supply lines (4). Electronic output signal is NON-SAFETY (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)
- Question #2: Is the Item used in applications other than nuclear facilities or activities?
 - NO (the item is not commercial grade)
 - YES (continue)

Commercial Grade Item Upgrade Dedication Form

SNF-3928, Rev. 1

ECN No. NA CGI No. CGI-SNF-D-13-P5-031

Page 2 of 12

Title: ASHCROFT PRESSURE SWITCH – MONITOR FOR LOW SCHe
PURGE PRESSURE

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. **SCHe Pressure Boundary Integrity – Prevents helium leakage from the SCHe System.**

2. **Maintain pressure boundary before and after Seismic event.**

3.

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-3928, Rev. 1

ECN No. NA CGI No. CGI-SNF-D-13-P5-031

Page 3 of 12

Title: ASHCROFT PRESSURE SWITCH – MONITOR FOR LOW SCHe
PURGE PRESSURE

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

- Fracture of the switch body or of the piping connection - helium leakage from the SCHe System.**

Section 4: Environmental & Natural Phenomena Hazard Design

Environmental Qualification Required:

Yes []

No [X]

Environmental Condition B

If yes: Environmental Qualification Requirements

Limiting Environmental Conditions:

Required Safety Functions:

Qualification Period:

Natural Phenomena Hazard (NPH) Design Required:

Yes [X]

No []

HNF-PRO-97, Rev. 0

W-441-P5, Rev. 2

If yes: NPH Design Requirements

Performance Category: **PC-3**

NPH Design Req'ts.: **Seismic Condition B**

Required Safety Functions: **Pressure Boundary Integrity**

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.

Pressure switch is pressure boundary Safety Class (SC).

Switch 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, Rev. 4A

Drawings: **H-1-82165, Rev. 2**

HNF-SD-SNF-SEL-002, Rev. 6, W-441-HE-441 and W-441-HE-442

Vendor Manuals/Manufacturer/Supplier Information: **Ashcroft Instrument Division, L Series Switches, Bulletin SE-12**

Other:

Commercial Grade Item Upgrade Dedication Form

SNF-3928, Rev. 1

ECN No. NA CGI No. CGI-SNF-D-13-P5-031

Page 4 of 12

Title: ASHCROFT PRESSURE SWITCH – MONITOR FOR LOW SCHe
PURGE PRESSURE

Section 9 Critical Characteristics				
Critical Characteristics	Acceptance Criteria/Tolerances	Acceptance Method	ID	Function
Verification Document: Vendor Specifications, HNF-SD-SNF-SEL-002, Rev. 6				
1. Item Identification Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
Component Number-Procurement and/or Model Number	LPS-N4-K-S-25-15 PSI, (Per Procurement Package W-441-P5, Rev. 2, Section G, Design Data Sheet)	1,IN	X	
Nameplate - Manufacturer	Ashcroft Instruments	1,IN	X	
Process Connection	1/4 Inch FNPT, Bottom Mounted	1,IN	X	
Pressure Range	0-15 psig	1,IN	X	
Enclosure	NEMA 4	1,IN	X	
2. Physical Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
Material, Body	Stainless Steel (Note 4)	1, IN 1, T	X	
Material, Process Connection	Stainless Steel (Note 4)	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 3	1,T		X
Setpoint/Repeatability	7.5 psig/ +/- 1% of Range	1,T		X
Environmental	Note 1			
Seismic Condition B	Note 2	1,T		X
Switch Contact Rating	NA			
Insulation Resistance	NA			

Commercial Grade Item Upgrade Dedication Form

SNF-3928, Rev. 1

ECN No. NA

CGI No. CGI-SNF-D-13-P5-031

Page 5 of 12

Title: ASHCROFT PRESSURE SWITCH – MONITOR FOR LOW SCHe
PURGE PRESSURE

4. Notes and Legend:

1. The pressure switch is not subject to degradation at ambient conditions of 40°F and 60% RH or 115°F and 22% RH and is suitable for Environmental Condition B application.
2. Maintain pressure boundary before and after Seismic event. W-441-P5, Rev. 2, Appendix I, page I-2, provides a seismic testing plan for these components at a seismic spectra TBD. Sensitive leak test per ASME B31.3, leakage acceptance criteria is $< 10^{-3}$ ml/sec or less. 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.
3. Pressure test at 110% of system design pressure of 150 psig. Exposure to test pressure may seriously degrade the switch function. This test is considered to be a destructive test.
4. Material verification acceptance method may be by either inspection or test.

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

-4

Section 10 Initial Reviews and Approvals

Approvals:

Designated Engineer:

[Signature]

Design Authority:

[Signature] 4/23/99

QA Engineer:

[Signature] 4/26/99

ECN No. NA CGI No. CGI-SNF-D-13-P5-031

Page 6 of 12

Title: ASHCROFT PRESSURE SWITCH – MONITOR FOR LOW SCHe
PURGE PRESSURE

**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 checked="" type="checkbox"/> No <input type="checkbox"/> ; If Yes, indicate failure Mode. <u>Failure of Transmitter Body or the Process Connection</u>
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"/> 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"/> 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"/> 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"/> 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"/> 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 type="checkbox"/> No <input checked="" type="checkbox"/> ; 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 <input type="checkbox"/> 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"/> 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"/> 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"/> 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"/> No <input checked="" type="checkbox"/> ; If Yes, indicate failure Mode. _____

Section 2 Additional Failure Modes Applicable to the Component Under Evaluation

1. Process Connection/Body Break _____
2. _____

ECN No. NA CGI No. CGI-SNF-D-13-P5-031
 Title: ASHCROFT PRESSURE SWITCH – MONITOR FOR LOW SCHe
PURGE PRESSURE

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

SECTION 1			
Item Description: Ashcroft Pressure Switch – Monitor For Low SCHe Purge Pressure System #: 13	Equip #: SCHe-PSL-5*06, 5*25, 5*45, 5*65 Procurement and/or Model #: LPS-N4-K-S-25-15 PSI.		
Manufacturer (Address/Phone): Ashcroft Instrument Division 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]	[]	[]	4. Pressure Range
[X]	[]	[]	5. Enclosure
[X]	[X]	[]	6. Material, Body (Verification may be by either inspection or test)
[X]	[X]	[]	7. Material, Process Connection (Verification may be by either inspection or test)
[]	[X]	[]	8. Pressure Boundary Integrity
[]	[X]	[]	9. Setpoint/Repeatability
[]	[X]	[]	10. Seismic Condition B
[]	[]	[]	11. Switch Contact Rating
[]	[]	[]	12. Insulation Resistance
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: LPS-N4-K-S-25-15 PSI, (Per Procurement Package W-441-P5, Rev. 2, Section G, Design Data Sheet Receipt Inspection Plan / Report #: _____ References (see Section 7): Ashcroft Instrument Division, L Series Switches, Bulletin Se-12			

Commercial Grade Item Upgrade Dedication Form

SNF-3928, Rev. 1

ECN No. NA CGI No. CGI-SNF-D-13-P5-031

Page 8 of 12

Title: ASHCROFT PRESSURE SWITCH – MONITOR FOR LOW SCHe
PURGE PRESSURE

Characteristic: **Nameplate - Manufacturer**

Sample Size*: **All Items**

Acceptance Criteria: **Ashcroft Instruments**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

Characteristic: **Process Connection**

Sample Size*: **All Items**

Acceptance Criteria: **1/4 Inch FNPT, Bottom Mounted**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

Characteristic: **Pressure Range**

Sample Size*: **All Items**

Acceptance Criteria: **0-15 psig**

Receipt Inspection Plan / Report #: _____

References (see Section 7): _____

Characteristic: **Enclosure**

Sample Size*: **All Items**

Acceptance Criteria: **NEMA 4**

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): _____

Commercial Grade Item Upgrade Dedication Form

SNF-3928, Rev. 1

ECN No. NA CGI No. CGI-SNF-D-13-P5-031

Page 9 of 12

Title: ASHCROFT PRESSURE SWITCH – MONITOR FOR LOW SCHe
PURGE PRESSURE

SECTION 4 BY SPECIAL TEST

* See Attachment G of Desk Instruction for Sampling Size

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

Characteristic for Test: **Pressure Boundary Integrity**

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

Sample Size*: **Destructively Test Only One Item**

Actual Test Value:

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

Characteristic for Test: **Seismic Condition B**

Acceptance Criteria: **Maintain Pressure Boundary Before And After Seismic Event. Sensitive leak test per ASME B31.3, leakage acceptance criteria is $< 10^{-3}$ ml/sec (No Bubbles).**

Sample Size*: **W-441-P5, Rev. 2, 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 7): _____

Characteristic for Test: **Setpoint/Repeatability**

Acceptance Criteria: **7.5 psig/ +/-1% of Range**

Sample Size*: **Normal Sampling Size**

Actual Test Value:

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

Characteristic for Test: **Switch Contact Rating**

Acceptance Criteria: **NA**

Sample Size*: **Normal Sampling Size**

Actual Test Value:

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

Characteristic for Test: **Insulation Resistance**

Acceptance Criteria: **NA**

Sample Size*: **Normal Sampling 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-3928, Rev. 1
Page 10 of 12

ECN No. NA CGI No. CGI-SNF-D-13-P5-031
 Title: ASHCROFT PRESSURE SWITCH - MONITOR FOR LOW SCHE PURGE PRESSURE

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/F/N	Procedure or RR#	Check-list ID	Number Tested	Number Failed	Verifying Organization	Printed Name Signature	Date
Component Number- Procurement and/or Model Number	LPS-N4-K-S-25-15 PSI, (Per Procurement Package W-441-P5, Rev. 2, Section G, Design Data Sheet)	X									
Nameplate - Manufacturer	Ashcroft Instruments	X									
Process Connection	1/4 Inch FNPT, Bottom Mounted	X									
Instrument Range	0-15 psig	X									
Enclosure	NEMA 4	X									
Material, Body	Stainless Steel	X									
Material, Process Connection	Stainless Steel	X									
Switch Contact Rating	NA										
Insulation Resistance	NA										
Pressure Boundary Integrity	No Leakage at Test Pressure of 165 psig (No Bubbles)		X								
Set Point / Repeatability	7.5 psig / +/- 1% of Range		X								

Commercial Grade Item Upgrade Dedication Form

SNF-3928, Rev. 1

Page 11 of 12

ECN No. NA CGI No. CGI-SNF-D-13-P5-031

Title: ASHCROFT PRESSURE SWITCH - MONITOR FOR LOW SCHE
PURGE PRESSURE

Seismic Condition B	Maintain Pressure Boundary Before and After Seismic Event.	X							
2. DISPOSITION OF UNVERIFIED OR FAILED CRITICAL CHARACTERISTICS									
Critical Characteristic								Disposition	
<p>3. SIGNATURE INDICATES ALL CRITICAL CHARACTERISTICS VERIFIED SATISFACTORY OR ACCEPTABLY DISPOSITIONED AND COMMERCIAL GRADE DEDICATION IS SATISFACTORY AND COMPLETE.</p>									
Testing Agency Approval: _____				Date _____		Design Authority: _____			Date _____
Testing Agency QA Engineer: _____				Date _____		QA Engineer: _____			Date _____
BUYER VERIFICATION									

Commercial Grade Item Upgrade Dedication Form

SNF-3928, Rev. 1

ECN No. NA CGI No. CGI-SNF-D-13-P5-031

Page 12 of 12

Title: ASHCROFT PRESSURE SWITCH – MONITOR FOR LOW SCHe
PURGE PRESSURE

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:	