2. To: (Receiving Organization) Distribution

3. From: (Originating Organization) SNF Project

4. Related EDT No.: N/A

5. Proj./Prog./Dept./Div.: Spent Nuclear Fuel Project


7. Purchase Order No.: N/A

8. Originator Remarks: N/A

9. Equip./Component No.: N/A

10. System/Bldg./Facility: Spent Nuclear Facility


12. Major Assm. Dwg. No.: N/A

13. Permit/Permit Application No.: N/A

14. Required Response Date: N/A

15. DATA TRANSMITTED

<table>
<thead>
<tr>
<th>(A) Item No.</th>
<th>(B) Document/Drawing No.</th>
<th>(C) Sheet No.</th>
<th>(D) Rev. No.</th>
<th>(E) Title or Description of Data Transmitted</th>
<th>(F) Approval Designator</th>
<th>(G) Reason for Transmittal</th>
<th>(H) Originator Disposition</th>
<th>(I) Receiver Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SNF-3888</td>
<td>0</td>
<td></td>
<td>FCI MCO Helium Inlet Flow Element/Indicator Transmitter</td>
<td>Q</td>
<td>2</td>
<td>1</td>
<td>N/A</td>
</tr>
</tbody>
</table>

16. KEY

<table>
<thead>
<tr>
<th>Approval Designator (F)</th>
<th>Reason for Transmittal (G)</th>
<th>Disposition (H) &amp; (I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E, S, Q, D or N/A</td>
<td>1. Approval</td>
<td>1. Approved</td>
</tr>
<tr>
<td>(see WHC-CM-3-5, Sec.12.7)</td>
<td>2. Release</td>
<td>2. Approved w/comment</td>
</tr>
<tr>
<td></td>
<td>3. Information</td>
<td>3. Disapproved w/comment</td>
</tr>
<tr>
<td></td>
<td>4. Review</td>
<td>4. Reviewed no/comment</td>
</tr>
<tr>
<td></td>
<td>5. Post-Review</td>
<td>5. Reviewed w/comment</td>
</tr>
<tr>
<td></td>
<td>6. Dist. (Receipt Acknow. Required)</td>
<td>6. Receipt acknowledged</td>
</tr>
</tbody>
</table>

17. SIGNATURE/DISTRIBUTION

(See Approval Designator for required signatures)

<table>
<thead>
<tr>
<th>(G) Reason</th>
<th>(H) Disp.</th>
<th>(J) Name</th>
<th>(K) Signature</th>
<th>(L) Date</th>
<th>(M) MSIN</th>
<th>(G) Reason</th>
<th>(H) Disp.</th>
<th>(J) Name</th>
<th>(K) Signature</th>
<th>(L) Date</th>
<th>(M) MSIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>Designated Engineer C. Van Katwijk</td>
<td>3/30/99</td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>Design Authority R. Whitehurst</td>
<td>3/30/99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>QA T. D. Hays</td>
<td>3/30/99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Signature of EDT Originator: C. Van Katwijk 3/30/99

19. Authorized Representative Date for Receiving Organization: T. Choho 3/30/99

20. Design Authority/Manager: R. Whitehurst 3/30/99

21. DOE APPROVAL (if required)

Ctrl. No. [X] Approved

[ ] Approved w/comments

[ ] Disapproved w/comments
FCI MCO Helium Inlet Element / Indicator Transmitter

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

EDT/ECN: 626261  UC: 620
Org Code: 2G300 Charge Code: 105559/A000
B&R Code: 39EW40400 Total Pages: 4

Key Words: Mass Flow Rate Meter / Indicator MCO

Abstract: FCI Helium Inlet Flow Element / Indicator Transmitter
CGI-SNF-D-13-P4-012

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.

Printed in the United States of America. To obtain copies of this document, contact: Document Control Services, P.O. Box 950, Mailstop H6-08, Richland WA 99352, Phone (509) 372-2420, Fax (509) 376-4989.
Commercial Grade Item Upgrade Dedication Form

ECN No.: NA
CGI No.: CGI-SNF-D-13-P4-012
Title: FCI MCO HELIUM INLET FLOW ELEMENT/INDICATOR TRANSMITTER

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.: Ha-FE/FIT-1*20, 1*21
Specification No.: W-441-P4, Rev. 2
Manufacturer: Fluid Components, Intl
Past P.O. No.: NA
Equipment Supplier (if different from manufacturer): Murrell-Hickey
Equip. Supplier's Part No.: NA

Manufacturer's Part/Model No.: 
FE/FIT-1*20 LT87-*11MC3B1B3A2BA002700C0053C2A201A1A1B5A1000*B1A 
FE/FIT-1*21 LT87-*11MC3B1B4A2BA002700C0053C2A201A1A1B5A1000*B1A 
1*20 - TOP TO BOTTOM CONFIGURATION 
1*21 - BOTTOM TO TOP CONFIGURATION

Component Description: Mass flow rate meter/indicator with integral flow rate totalizer, power supply, signal conditioner, linearizing circuit and output signal transmitter. Measure helium purge flow to the MCO.

Section 2b Commercial Availability of the Item

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)?
   [X] YES (go to #2 below)
   [ ] 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

   Murrell-Hickey 
   Jim Joyce 
   (425) 454-0460 
   PO BOX 3511 
   BELLEVUE, WA 98009

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

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)

12/18/98
**Commercial Grade Item Upgrade Dedication Form**

**ECN No.** NA  
**CGI No.** CGI-SNF-D-13-P4-012

**Title:** FCI MCQ HELIUM INLET FLOW ELEMENT/INDICATOR TRANSMITTER

---

<table>
<thead>
<tr>
<th>Question #2: Is the item used in applications other than nuclear facilities or activities?</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] NO (the item is not commercial grade)</td>
</tr>
<tr>
<td>[ ] YES (continue)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question #3: Is the item ordered from manufacturer/supplier on the basis or specifications set forth in the manufacturers catalog?</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] NO (the item is not commercial grade)</td>
</tr>
<tr>
<td>[ ] YES (continue)</td>
</tr>
</tbody>
</table>

[ ] All three criteria have been satisfied. The item meets the definition of commercial grade.

[ X ] It is determined that the item is not commercial grade. The item is currently specified to be procured as safety-grade from a qualified vendor and no commercial dedication is required.

Section 2d Reason for Dedication:
The above described item is being dedicated for use in the application cited for the following reason(s):

Section 3 Failure Effects Evaluation:

Section 4 Environmental & Natural Phenomena Hazard Design:

Section 5 Component Functional Classification:

Section 6 (Reserved):

Section 7 (Reserved):

Section 8 References (for Functional Classification):

Section 9 Critical Characteristics:

4. Notes and Legend:

This item is nuclear quality and does not require CGI procurement dedication.

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

Section 10 Initial Review and Approval:

**Approvals:**
- **Designated Engineer:** [Signature] 12/6/98
- **Design Authority:** [Signature] 12/2/98
- **QA Engineer:** [Signature] 12/2/98

12/18/98
## Section 5 Test/Inspection Summary (Acceptance Method 1)

### 1. SUMMARY OF VERIFIED CRITICAL CHARACTERISTICS, THEIR VERIFICATION METHODS, AND RESULTS

<table>
<thead>
<tr>
<th>ITEM DESCRIPTION:</th>
<th>Critical Characteristics</th>
<th>Verification Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Characteristic</td>
<td>Acceptance Criteria/Tolerances</td>
<td>ID</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2. DISPOSITION OF UNVERIFIED OR FAILED CRITICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Critical Characteristic</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3. SIGNATURE INDICATES ALL CRITICAL CHARACTERISTICS VERIFIED SATISFACTORY OR ACCEPTABLY DISPOSITIONED AND COMMERCIAL GRADE DEDICATION IS SATISFACTORY AND COMPLETE.

<table>
<thead>
<tr>
<th>BUYER VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Testing Agency Approval:</td>
</tr>
<tr>
<td>Design Authority:</td>
</tr>
<tr>
<td>Testing Agency QA Engineer:</td>
</tr>
<tr>
<td>QA Engineer:</td>
</tr>
</tbody>
</table>

12/18/98