

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		6. Design Authority/ Design Agent/Cog. Engr.: C. Van Katwijk		7. Purchase Order No.: N/A	
8. Originator Remarks: N/A				9. Equip./Component No.: N/A	
				10. System/Bldg./Facility: Spent Nuclear Facility	
11. Receiver Remarks: 11A. Design Baseline Document? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				12. Major Assm. Dwg. No.: N/A	
				13. Permit/Permit Application No.: N/A	
				14. Required Response Date: N/A	

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Desig- nator	Reason for Trans- mittal	Origi- nator Dispo- sition	Receiv- er Dispo- sition
1	SNF-3891		0	Fabricated - MCO Inlet/Outlet Valves VPS-V-*010 and *019	Q	2	1	N/A

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

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)											
(G) Rea- son	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Rea- son	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN
2	1	Designated Engineer	C. Van Katwijk								
2	1	Design Authority	J. J. Irwin								
2	1	QA	T. D. Hays	2-18-99							

18. Signature of EDI Originator <i>C. Van Katwijk</i> Date: 2-9-99		19. Authorized Representative Date for Receiving Organization <i>T. Choho</i> Date: 2/22/99		20. Design Authority/ Cognizant Manager Date <i>J. J. Irwin</i> Date: 2/11/99		21. DOE APPROVAL (if required) Ctrl. No. <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comments	
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Fabricated – MCO Inlet / Outlet Valves

5

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

EDT/ECN: 626264 UC: 620
Org Code: 2G300 Charge Code: 105559/A000
B&R Code: 39EW40400 Total Pages: 7

Key Words: Isolation Valves - MCO

Abstract: Fabricated – MCO Inlet/Outlet Valves VPS-V-*010 and *019
CGI-SNF-D-46-1-P4-016

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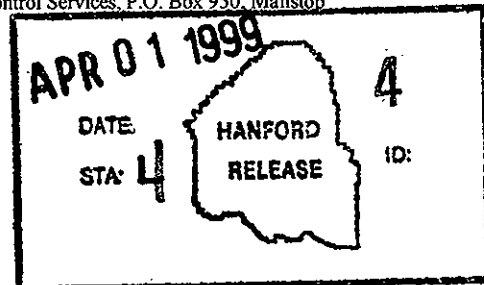
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Release Approval

4/1/99

Date



Release Stamp

Approved for Public Release

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Title: FABRICATED - MCO INLET/OUTLET VALVES VPS-V-*010 AND *019

SDF 3891

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.: VPS-V-*010 AND VPS-V-*019	Specification No.: W-441-P4, Rev. 2	Manufacturer: (Fabricated*)	Past P.O. No.: NA
Manufacturer's Part/ Model No.: NA	Equipment Supplier (if different from manufacturer): *This is an engineered component manufactured to drawing H-1-82366 and H-1-82368.		Equip. Supplier's Part No.: NA

Component Description: **This is an engineered component valve installed on the MCO to provide isolation/confinement.**

Section 2b Qualified Vendor/Supplier Survey

1. Is the Item available from a catalog from a qualified NQA1 or ISO 9000 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.)

J.F. 12/21/98
12/21/98

2. List of Candidate qualified suppliers or ISO suppliers:

company name and type

contact name

phone

**Cold Vacuum Drying
Facility Single Valve
Operator
Drawing Numbers H-1-
82366 And H-1-82368**

J.F. 12/21/98
12/21/98

3. Recommended Procurement Strategy (coordinate with project CGI interface

Engineer or BTR). **W-441-P4, Rev. 2, Appendix L, pages (TBD), provide a seismic testing plan for these components at a (TBD) seismic spectra.**

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Section 2: 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)

3. Question #3: Is the Item ordered from manufacturer/supplier on the basis or specifications set forth in the manufacturers catalog?

NO (the Item is not commercial grade)

YES (continue)

All three criteria have been satisfied. The Item meets the definition of commercial grade.

It is determined that the item is not commercial grade. The item is a engineered component (H-I-82366 and H-I-82368) for the specific use in the process hood package and is not available from a commercial catalog. No further CGI evaluation 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):

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.

2.

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

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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):

- 1.
- 2.
- 3.

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

- 1.
- 2.
- 3.
- 4.
- 5.

Section 4 Environmental & Natural Phenomena Hazard Design

Environmental Qualification Required:

- Yes
- No

If yes: Environmental Qualification Requirements

Limiting Environmental Conditions:

Required Safety Functions:

Qualification Period:

Natural Phenomena Hazard (NPH) Design Required:

- Yes
- No

If yes: NPH Design Requirements

Performance Category:

NPH Design Req'ts.:

Required Safety Functions:

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.

Section 6 [reserved]

Section 7 [reserved]

Section 8 References (for Functional Classification)

National Codes/Standards:

Safety Analysis Report (SAR):

Drawings:

Vendor Manuals/Manufacturer/Supplier Information:

Other:

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Section 9: Critical Characteristics

Critical Characteristics Verification Document:	Acceptance Criteria/Tolerances	Acceptance Method	ID	Function
1. Item Identification Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
2. Physical Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
3. Performance Critical Characteristics (necessary & sufficient for reasonable assurance that the Item will perform its intended safety function(s))				

4. Notes and Legend:

This item not a catalog component or vendor supplied item. It is a specific use engineered component. It 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 reviews and Approvals

Approvals:

Designated Engineer: [Signature] 12/21/98

Design Authority: [Signature] 12/21/98

QA Engineer: [Signature] 12/22/98

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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. _____
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. _____
2. _____
3. _____
4. _____

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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
<p>This item is not a catalog component or vendor supplied item. It is a specific use engineered component. It does not require CGI procurement dedication.</p>											

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 _____		_____ _____	