S

ENGINEERING CHANGE NOTICE

Page 1 of 21. ECN **654030**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. TA Nuxall, SNF CVD, R3-86, 372-3739	4. USQ Required? ☐ Yes ☒ No	5. Date 7/21/99
	6. Project Title/No./Work Order No. W-441 Spent Nuclear Fuel Cold Vacuum Drying	7. Bldg./Sys./Fac. No. CVDF	8. Approval Designator SQ
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 Clarification that either Whitey or Swagelock is acceptable for Nameplate marking.			
14a. Justification (mark one) Criteria Change ☒ Design Improvement ☐ Environmental ☐ Facility Deactivation ☐ As-Found ☐ Facilitate Const ☐ Const. Error/Omission ☐ Design Error/Omission ☐			
14b. Justification Details RFI HE-025.			
15. Distribution (include name, MSIN, and no. of copies) See Distribution			RELEASE STAMP <div style="border: 2px solid black; padding: 5px;"> JUL 22 1999 DATE STA: 4 <div style="border: 1px solid black; padding: 5px; display: inline-block;"> HANFORD RELEASE </div> ID: 4 </div>

A-7900-013-2 (05/96) GEF095

A-7900-013-1

654030

A-7900-013-3 (05/96) GEF096

WHITEY SCHe GAUGE/ROOT VALVES

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

EDT/ECN: 654030	UC: 620
Org Code: 2G300	Charge Code: 105559/A000
B&R Code: 39EW40400	Total Pages: 14

Key Words: Whitey SCHe Gauge/Root Valves

Abstract: Whitey SCHe Gauge/Root Valves

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.

Release Approval

7/22/99

Date

Release Stamp

Approved for Public Release

[illegible]

SNF-3921

Page 1

(2) Title

WHITEY SCHe GAUGE/ROOT VALVES

Change Control Record

(3) Revision

(4) Description of Change - Replace, Add, and Delete Pages

Authorized for Release

(5) Cog. Engr.

(6) Cog. Mgr.

Date _____

0

(7)

EDT 626270, INITIALLY RELEASED

1

ECN 653776 REVISION TO MEET SEL REV. 6

2

ECN 647508, REVISION TO MEET SEL REV. 6a

R9 3

ECN 654030, CLARIFICATION OF VALVE MANUFACTURER

CR 26/1/17 7/21/95

Commercial Grade Item Upgrade Dedication Form		SNF-3921, Rev. 3
ECN No. NA	CGI No. CGI-SNF-D-13-P5-024	Page 1 of 12
Title: WHITEY SCHe GAUGE/ROOT VALVES		

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-V-*064,*065, *082,*084 (3000 psig); SCHe-V-*069,*070, *083,*085,*088, *089,*077,*078 (150 psig)	Specification No.: W-441-P5, Rev. 2	Manufacturer: Whitey / Swagelok Co.	Past P.O. No.: NA						
Procurement and/or Model No.: SS-6PNBGM8-F8	Equipment Supplier (if different from manufacturer): TBD		Equip. Supplier's Part No.: NA						
Component Description: These valves are ½" ball valves fabricated of 316 stainless steel. Packing is TFE (standard). They are used as isolation valves for pressure instrumentation in the SCHe System between the helium bottle supply manifolds and safety class helium pressure instrumentation, and in lower pressure SCHe supply line.									
Section 2b Commercial Availability of the Item									
<p>1. Is the Item available from a catalogue of a qualified NQA1 supplier? (coordinate with project CGI interface Engineer or BTR)</p> <p>☐ YES (go to #2 below)</p> <p>☒ NO (go to procedure step 5.3.2, proceed to dedicate Item.)</p> <p>If not available from a qualified NQA1 supplier, is it available from an ISO 9000 supplier? (coordinate with project CGI interface Engineer or BTR)</p> <p>☐ YES (go to #2 below, then go to procedure step 5.3.2, proceed to dedicate Item)</p> <p>☒ NO (go to procedure step 5.3.2, proceed to dedicate Item.)</p>									
<p>2. List of Candidate qualified suppliers or ISO 9000 suppliers</p> <table border="0"> <tr> <td>company name & type</td> <td>contact name</td> <td>phone</td> </tr> <tr> <td colspan="3">NA</td> </tr> </table>				company name & type	contact name	phone	NA		
company name & type	contact name	phone							
NA									
<p>3. Recommended Procurement Strategy (coordinate with project CGI interface Engineer or BTR): NA</p>									

Commercial Grade Item Upgrade Dedication Form		SNF-3921, Rev. 3
ECN No. NA	CGI No. CGI-SNF-D-13-P5-024	Page 2 of 12
Title: WHITEY SCHe GAUGE/ROOT VALVES		

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)	
☒ 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 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/confinement. Prevents air inleakage/loss of SCHe during normal operation. Prevent H₂ Explosion	
2. Maintain critical function before and after Seismic event.	
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

Commercial Grade Item Upgrade Dedication Form		SNF-3921, Rev. 3
ECN No. NA	CGI No. CGI-SNF-D-13-P5-024	Page 3 of 12
Title: WHITEY SCHe GAUGE/ROOT VALVES		

C. Host Component Safety Function (if applicable): **NA**

1.

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

1. **Valve Body Break/Pressure boundary failure. Could cause a loss of SCHe supply from the affected bottle and manifold to the MCO.**

Section 4 Environmental & Natural Phenomena Hazard Design

Environmental Qualification Required:

Yes ☐

No ☒

Environmental Condition B

Natural Phenomena Hazard (NPH) Design Required:

Yes ☒

No ☐

HNF-PRO-97, Rev. 0

W-441-P5, Rev. 2

If yes: Environmental Qualification Requirements

Limiting Environmental Conditions:

Required Safety Functions:

Qualification Period:

If yes: NPH Design Requirements

Performance Category: **PC-3**

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

Required Safety Functions: **Maintain pressure boundary/confinement, prevent H₂ explosion.**

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. **NA**

Section 6 (Reserved)

Section 7 (Reserved)

Section 8 References (for Functional Classification)

National Codes/Standards:

ASME B31.3

Safety Analysis Report (SAR):

HNF-SD-SNF-SAR-002,
Rev. 4A

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

HNF-SD-SNF-SEL-002, Rev. 6A

Vendor Manual/Manufacturer/Supplier Information: **Whitey Co. W-1086**

Other: **NA**

Commercial Grade Item Upgrade Dedication Form		SNF-3921, Rev. 3
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-13-P5-024</u>	Page 4 of 12
Title: <u>WHITEY SCHe GAUGE/ROOT VALVES</u>		

Section 9 Critical Characteristics				
Critical Characteristics Verification Document: Vendor's Manual; HNF-SD-SNF-SEL-002, Rev. 6A	Acceptance Criteria/Tolerances	Acceptance Method	ID	Function
1. Item Identification Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
Nameplate - Manufacturer	Whitey / Swagelok Co. (Note 6)	1, IN	X	
Valve-Component Number-Procurement and/or Model Number	SS-6PNBGM8-F8, (Per Procurement Package W-441-P5, Rev. 2, Section H, Design Data Sheet)	1, IN	X	
Process Connection	1/2" MNPT to 1/2" FNPT	1, IN	X	
2. Physical Critical Characteristics (for reasonable assurance that the Item delivered is the Item specified)				
Valve Body Material	Stainless Steel (Note 5)	1, IN 1, T	X	
Process Connection Material	Stainless Steel (Note 5)	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 SCHe-V-*064, *065, *082, and *084	Pressure Test at 3300 psig (No Leakage) Note 3	1, T		X
Pressure Boundary Integrity SCHe-V-*069, *070, *077, *078, *083, *085, *089, and *089	Pressure Test at 165 psig (No Leakage) Note 4	1, T		X
Valve Seat Leakage	< 0.1 SCC/min N2 @ 3000 psig	1, T		X
Environmental	Note 1			
Seismic Condition A	Note 2	1, T		X
4. Notes and Legend:		Acceptance Method:		
<ol style="list-style-type: none"> These valves do not have non-metallic parts that are subject to degradation from the 40°F and 60% RH or 115°F and 22% RH condition and are suitable for Condition B application. Maintain critical function 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. 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. Pressure test at 110% He Bottle max supply pressure of 3000 psig. For use of all valves for application at 3000 psig service, pressure test all valves at 3300 psig. Pressure test at 110% of 150 psig system design pressure. Material verification acceptance method may be by either inspection or test. Either Whitey or Swagelok is acceptable. 		<ol style="list-style-type: none"> Special Test and Inspection 1, IN for Inspection 1, T for Test Commercial Grade Survey Source Verification Vendor/Item History 		

Commercial Grade Item Upgrade Dedication Form		SNF-3921, Rev. 3
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-13-P5-024</u>	Page 5 of 12
Title: <u>WHITEY SCHe GAUGE/ROOT VALVES</u>		

Section 10 Initial Review and Approval	
Approvals: Designated Engineer: <u><i>T. C. VanKatwijk</i> 7/21/99</u> Design Authority: <u><i>C. R. Numa</i> 7/21/99</u> QA Engineer: <u><i>W. H. Hirsch</i> 7/21/99</u>	

Commercial Grade Item Upgrade Dedication Form

SNF-3921, Rev. 3

ECN No. **NA**

CGI No. **CGI-SNF-D-13-P5-024**

Page 6 of 12

Title: **WHITEY SCHe GAUGE/ROOT VALVES**

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 [X]; 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 [X]; 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 [X]; 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 [X]; 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 [X]; 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 [X]; If Yes, indicate failure Mode _____
Seizure	Binding of a normally moving item through excessive pressure, temperature, friction, jamming.	Yes []	No [X]; 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 [X]; 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 [X]; 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 [X]; 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 [X]; If Yes, indicate failure Mode _____
Ductile Fracture	Fracture characterized by tearing of metal accompanied by appreciable gross plastic deformation.	Yes []	No [X]; If Yes, indicate failure Mode _____

Section 2 Additional Failure Modes Applicable to the Component Under Evaluation

1. **Valve Body Break**

Commercial Grade Item Upgrade Dedication Form		SNF-3921, Rev. 3
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-13-P5-024</u>	Page 7 of 12
Title: <u>WHITEY SCHe GAUGE/ROOT VALVES</u>		

CHECKLIST 1
ACCEPTANCE METHOD 1
SPECIAL TEST/INSPECTION VERIFICATION

SECTION 1			
Item Description: Whitey / Swagelock SCHe Gauge/Root Valve		Equip #: SCHe-V-*064, *065, *082, *084 (3000 psig);	
System #: 13		SCHe-V-*069, *070, *083, *085, *088, *089,*077, *078 (150 psig)	
		Procurement and/or Model #: SS-6PNBGM8-F8	
Manufacturer (Address/Phone): Whitey Co. 318 Bishop Road Highland Heights, OH 44143 P.O. #		Supplier (Address/Phone):	
SECTION 2 CRITICAL CHARACTERISTICS TO BE VERIFIED BY METHOD 1.			
Insp	Test	Post-Test	
☒	☐	☐	1. Nameplate - Manufacturer
☒	☐	☐	2. Valve-Component Number-Procurement and/or Model Number
☒	☐	☐	3. Process Connection
☒	☒	☐	4. Valve Body Material (Verification may be by either inspection or test)
☒	☒	☐	5. Process Connection Material (Verification may be by either inspection or test.
☐	☒	☐	6. Pressure Boundary Integrity
☐	☒	☐	7. Valve Seat Leakage
☐	☒	☐	8. Seismic Condition A

Commercial Grade Item Upgrade Dedication Form		SNF-3921, Rev. 3
ECN No. NA	CGI No. CGI-SNF-D-13-P5-024	Page 8 of 12
Title: WHITEY SCHc GAUGE/ROOT VALVES		

SECTION 3 BY INSPECTION
* See Attachment G of Desk Instruction for Sampling Size
Characteristic: Nameplate - Manufacturer
Sample Size*: All Items
Acceptance Criteria: Whitey / Swagelok Co. (Either Whitey or Swagelok is acceptable)
Receipt Inspection Plan / Report #: _____
References (see Section 7): _____
Characteristic: Valve-Component Number-Procurement and/or Model Number
Sample Size*: All Items
Acceptance Criteria: SS-6PNBGM8-F8
Receipt Inspection Plan / Report #: _____
References (see Section 7): Whitey Co. W-1086, July 1991
Characteristic: Process Connection
Sample Size*: All Items
Acceptance Criteria: 1/2" MNPT TO 1/2" FNPT
Receipt Inspection Plan / Report #: _____
References (see Section 7): _____
Characteristic: Valve Body Material
Sample Size*: Normal Sampling Size
Acceptance Criteria: Stainless Steel
Receipt Inspection Plan / Report #: _____
References (see Section 7): _____
Characteristic: Process Connection Material
Sample Size*: Normal Sampling Size
Acceptance Criteria: Stainless Steel
Receipt Inspection Plan / Report #: _____
References (see Section 7): _____

[illegible]

Commercial Grade Item Upgrade Dedication Form		SNF-3921, Rev. 3
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-13-P5-024</u>	Page 9 of 12
Title: <u>WHITEY SCHe GAUGE/ROOT VALVES</u>		

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 SCHe-V-*064, *065, *082, and *084 Acceptance Criteria: Pressure Test at 3300 psig (No Leakage) Sample Size*: Normal Sampling Size Actual Test Value: Test Plan and Report #: _____ References (see Section 7): _____	
Characteristic for Test: Pressure Boundary Integrity SCHe-V-*069, *070, *077, *078, *083, *085, *088, and *089 Acceptance Criteria: Pressure Test at 165 psig (No Leakage) Sample Size*: Pressure Boundary tests performed at 3300 psig can also be used to document the critical characteristic pressure boundary test at 165 psig for valves in the same lot. Actual Test Value: Test Plan and Report #: _____ References (see Section 7): _____	
Characteristic for Test: Valve Seat Leakage Acceptance Criteria: <0.1 SCC/min N2 @ 3000 psig Sample Size*: Normal Sampling Size Actual Test Value: Test Plan and Report #: _____ References (see Section 7): _____	
Characteristic for Test: Seismic Condition A Acceptance Criteria: Maintain Critical Function Before And After Seismic Event. 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): _____	

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

Commercial Grade Item Upgrade Dedication Form

SNF-3921, Rev. 3

ECN No. NA CGI No. CGI-SNF-D-13-P5-024

Page 10 of 12

Title: WHITEY SCHe GAUGE/ROOT VALVES

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
Nameplate - Manufacturer	Whitey / Swagelok Co. (Either Whitey or Swagelok is Acceptable)	X									
Valve-Component Number-Procurement and/or Model Number	SS-6PNBGM8-F8, (Per Procurement Package W-441-P5, Rev. 2, Section H, Design Data Sheet)	X									
Process Connection	1/2" MNPT TO 1/2" FNPT	X									
Valve Body Material	Stainless Steel	X									
Process Connection Material	Stainless Steel	X									
Pressure Boundary Integrity SCHe-V- *064, *065, *082, and *084	Pressure Test at 3300 psig (No Leakage) NOTE 1		X								
Pressure Boundary Integrity SCHe-V- *069, *070, *077, *078, *083, *085, *088, and *089	Pressure Test at 165 psig (No Leakage)		X								
Valve Seat Leakage	<0.1 SCC/min N2 @ 3000 psig.		X								
Seismic Condition A	Maintain Critical Function Before and After Seismic Event.		X								

07/21/99

Commercial Grade Item Upgrade Dedication Form		SNF-3921, Rev. 3
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-13-P5-024</u>	Page 11 of 12
Title: <u>WHITEY SCHe GAUGE/ROOT VALVES</u>		

Note 1: Pressure test all valves at 3300 psig and test seat leakage at 3000 psig for service at 3000 psig.

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.	

		BUYER VERIFICATION	
Testing Agency Approval: _____	Date _____	Design Authority: _____	Date _____
Testing Agency QA Engineer: _____	Date _____	QA Engineer: _____	Date _____

Commercial Grade Item Upgrade Dedication Form		SNF-3921, Rev. 3
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-13-P5-024</u>	Page 12 of 12
Title: WHITEY SCHe GAUGE/ROOT VALVES		

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 Tracability Record	
☐ Other:	

DISTRIBUTION SHEET

To	From	Page 1 of 1
Distribution	SNF-CVD	Date 7/21/99
Project Title/Work Order		EDT No. N/A
W-441, CGI, SNF-3921, Rev. 3, Whitey SCHe Gauge/Root Valves		ECN No. 654030

[illegible]