

SK #19
 JUN 15 2000

ENGINEERING DATA TRANSMITTAL

Page 1 of 1
 1. EDT 629216

2. To: (Receiving Organization) Distribution	3. From: (Originating Organization) Canister Cleaning System A.2.A	4. Related EDT No.: N/A
5. Proj./Prog./Dept./Div.: Debris Removal Subproject	6. Design Authority/Design Agent/Cog. Engr.: C. C. Farwick	7. Purchase Order No.: N/A
8. Originator Remarks: Approval.		9. Equip./Component No.: N/A
		10. System/Bldg./Facility: N/A
11. Receiver Remarks: Document the final design review of the Canister Cleaning System.		12. Major Assm. Dwg. No.: N/A
11A. Design Baseline Document? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		13. Permit/Permit Application No.: N/A
USQ - K - 00 - 0775 CCF 5/23/00		14. Required Response Date: 5/10/00

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 Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	SNF-6398	N/A	0	Canister Cleaning System Final Design Report - Project A.2.A	E, S ^{IIH,N} , Q	1	1	

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) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN
1	1	Design Authority	<i>D. R. Precechtel</i>	6/1/00	DR Precechtel X3-85	1	1	Env.	<i>R. Gant</i>	5/25/00	RG Gant X3-79
1	1	Design Agent	<i>F. C. Ohl</i>	6-1-00	PC Ohl H4-01	1	1	QA	<i>J. Diehl</i>	6-1-00	JJ Diehl X3-80
1	1	Cog. Eng.	<i>M. J. Langevin</i>	6/1/00	MJ Langevin X4-01	1	1	Safety	<i>BC Cooper</i>	5/11/00	BC Cooper X3-60
1	1	Radcon	<i>CA Bullock</i>	4/13/00	CA Bullock X3-68	1	1	Other	<i>WB Anderson</i>	25 May 00	WB Anderson X4-01
1	1	Proj. Mgr.	<i>F. J. Muller</i>	5/30/00	FJ Muller X3-85	1	1	Other	<i>R. Hernandez</i>	4/1/00	R Hernandez X3-85
1	1	Operations	<i>DE Bullock</i>	5-15-00	DE Bullock X3-76						
1	1	Safety	<i>SH Peck</i>	5/25/00	SH Peck R3-26						

17. Signature of EDT Originator <i>C. C. Farwick</i> 5/23/00	18. Authorized Representative For Receiving Organization <i>F. J. Muller</i> 6/2/00	19. Design Authority/Cognizant Manager <i>D. R. Precechtel</i> 6/5/00	20. DOE APPROVAL (if required) Ctrl. No. N/A <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comment
--	---	---	--

DISTRIBUTION SHEET

To: Distribution	From: C. C. Farwick	Page 1 of 1
		Date: May 16, 2000
Project Title/Work Order Canister Cleaning System Final Design Report – Project A.2.A, SNF-6398, Rev. 0		EDT No. 629216
		ECN No. N/A

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
W. B. Anderson	X4-01	X			
C. A. Bullock	X3-68	X			
D. E. Bullock	X3-76	X			
B. C. Cooper	X3-60	X			
J. I. Diehl	X3-80	X			
C. C. Farwick	X3-85	X			
R. G. Gant	X3-79	X			
R. Hernandez	X3-85	X			
J. A. Kimbrough	X3-65	X			
M. J. Langevin	X3-76	X			
F. J. Muller	X3-85	X			
P. C. Ohl	H4-01	X			
S. H. Peck	R3-26	X			
D. R. Precechtel	X3-85	X			
D. H. Splett	S7-41	X			
J. E Turnbaugh	X3-79	X			
SNF Project Files A.2.A	X3-85	X			

S

SNF-6398
Revision 0

Canister Cleaning System Final Design Report – Project A.2.A

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

Canister Cleaning System Final Design Report – Project A.2.A

C. C. Farwick
Fluor Hanford

Date Published
May 2000

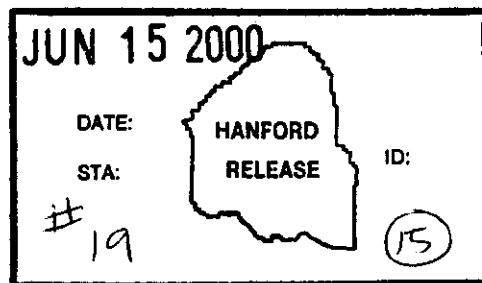
Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

Fluor Hanford
P.O. Box 1000
Richland, Washington

Gris Braden
Release Approval

6/15/00
Date



Release Stamp

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CANISTER CLEANING SYSTEM FINAL DESIGN REPORT

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CANISTER CLEANING SYSTEM FINAL DESIGN REPORT

1.0 INTRODUCTION

Approximately 2,300 metric tons Spent Nuclear Fuel (SNF) are currently stored within two water filled pools, the 105 K East (KE) fuel storage basin and the 105 K West (KW) fuel storage basin, at the U.S. Department of Energy, Richland Operations Office (RL). The SNF Project is responsible for operation of the K Basins and for the materials within them. A subproject to the SNF Project is the Debris Removal Subproject, which is responsible for removal of empty canisters and lids from the basins.

The Canister Cleaning System (CCS) is part of the Debris Removal Project. The CCS will be installed in the KW Basin and operated during the fuel removal activity. The KW Basin has approximately 3600 canisters that require removal from the basin. The CCS is being designed to “clean” empty fuel canisters and lids and package them for disposal to the Environmental Restoration Disposal Facility complex. The system will interface with the KW Basin and be located in the Dummy Elevator Pit.

2.0 SCOPE

COGEMA Engineering was the Architectural engineering firm that designed the CCS for Fluor Hanford. The scope of this review is to verify the CCS design meets the requirements in the Performance Specification SNF-5502.

3.0 DESIGN REVIEW

The CCS is made up of the following subsystems:

- Canister Transport Subsystem - shall retrieve empty canisters from the fuel cleaning station to the dummy elevator pit utilizing the existing monorail and trolley system.
- Canister Cleaning Subsystem - canisters and lids will be washed inside and out with high-pressure water jets
- Canister Removal Subsystem – canisters shall be retrieved into a HEPA filtered greenhouse where they will be removed from the basin water.
- Canister Preparation Subsystem - the canisters and lids will be allowed to drip-dry. The containment enclosure will allow for radiological surveys, characterization, etc. While in the enclosure the canisters and lids will be dipped into a coating to minimize the spread of residual air borne and contact contamination.

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Project A.2.A

- Canister Disposal Subsystem - canisters will be transported from the containment enclosure to the burial boxes by a pull cart, which can transport three to four canisters at a time.

This design review covered the CCS, including drawings, procurement specifications, construction specification, and calculations.

The final design review meeting was held on April 20, 2000. Reviewers received their comments with disposition prior to the meeting. Comments and questions were addressed and the Review Comment Records were signed off (Appendix B). No actions were determined or recorded during the meeting.

COGEMA is contracted with fabrication of the Greenhouse and the High Pressure Water pump skid and accessories. They will maintain control per their procedures for any modifications to the design during fabrication. At turnover of equipment, COGEMA will provide the project with as-built drawings and specifications.

The Construction Specification and associated drawing for modifications to KW Basin will be released into the Hanford Site Document Control System.

APPENDIX A

**CANISTER CLEANING SYSTEM
DESIGN REVIEW CHECK LIST**

**CONSISTING OF 8 PAGES
INCLUDING COVERSHEET**

Appendix A

**CANISTER CLEANING SYSTEM
DESIGN REVIEW CHECK LIST**

Documents reviewed: Construction Specification, High Pressure Water Jet Procurement Specification, Greenhouse Procurement Specification, Calculations and Design Drawings

Project	System/Component	Design Phase			Cognizant Reviewer
Item	Review Consideration	Yes	No	NA	Remarks
1	Have assumptions necessary to perform the design task been adequately described and are they reasonable?	X			
2	Have the appropriate Quality Assurance requirements been specified.	X			Specific call out for NQA-1 will be removed from the specs. The requirements will be applied as appropriate.
3	Were sources of information identified?	X			
4	Does the design meet the established requirements or design criteria?	X			
5	Does the design meet established requirements for associated system physical and functional interfaces?	X			
6	Have the interface requirements with site construction drawings been clearly specified and are they achievable?	X			ICD for both water and air
7	Is there any interface problems?		X		
8	Has appropriate consideration been given to use of standardized parts, materials and processes, and have engineering standards and criteria been specified properly in the design?	X			
9	Does the design represent the simplest design consistent with functional requirements and expected service conditions?	X			
10	Can the equipment be readily assembled/disassembled as designed?	X			
11	Does the design minimize overall cost to the extent practicable?	X			

Appendix A

Project		System/Component		Design Phase			Cognizant Reviewer
Item	Review Consideration			Yes	No	NA	Remarks
12	Are the specified materials compatible with each other and the environmental conditions to which the material will be exposed?			X			
13	Are the applicable codes, standards and requirements, including revisions, properly identified and are their design requirements provided for?			X			
14	Have qualified and certified parts been specified?			X			
15	Have available data on similar designs been used?			X			
16	Does the design meet functional requirements? Stresses are within design Limits?			X			
17	Will the design meet the following environmental conditions? a. Temperature b. Flow including induced vibration c. Pressure d. Nuclear radiation			X			
18	Is the design producible by conventional means?			X			
19	Do manufacturing, processing, and fabrication procedures minimize stress corrosion and fatigue?					X	
20	Are the specified construction materials resistant to the following as applicable: a. Moisture b. Radiation			X			
21	Are mechanical tolerances within the limits of normal shop practice?			X			
22	Are assembly clearances adequate?			X			

Appendix A

Project	System/Component	Design Phase			Cognizant Reviewer
Item	Review Consideration	Yes	No	NA	Remarks
23	Have allowable leakages been specified?	X			
24	Have non-corrosive materials been used where required?	X			
25	Does the design avoid any materials unproven for use in the anticipated environment?	X			
26	Can the assembly be stored for extended periods of time without degrading effects?	X			
27	Has the design appropriately considered maintenance, operation and reliability, including maintenance procedures and techniques, unique maintenance requirements and frequencies?	X			Maintenance procedures and operating procedures are scheduled and budgeted for.
28	Are coatings (or finishes) compatible with the expected environment? With expected usage?		X		Action coating analysis needs to be completed.
29	Are required tolerances, fabrication techniques, processes, etc., consistent with standard practices?	X			
30	Can the design and its parts be easily inspected for conformance to engineering specifications?	X			
31	Has adequate accessibility been provided for in-service inspection?	X			
32	Does the design meet all established safety requirements?	X			
33	Has an acceptable level of radiation exposure been defined?	X			
34	Have personnel radiation protection requirements been considered and identified?	X			ALARA white paper that will feed into the ALARA report
35	Have nuclear criticality safety considerations been incorporated?			X	
36	Have necessary features been provided to maintain personnel radiation exposure as low as reasonably achievable?	X			

Appendix A

Project		System/Component	Design Phase			Cognizant Reviewer
Item	Review Consideration		Yes	No	NA	Remarks
37	Can the hardware be adequately disposed of after use if it is radiologically or chemically contaminated?		X			
38	Have requirements for receiving and storing the equipment item been defined?		X			Small parts disposal large parts D&D
39	Have adequate acceptance criteria been specified and are the verification methods stated appropriately?		X			FAT for fabrication facilities and PAT for basin
40	Have welding, bolting, joining methods been adequately specified?		X			Code requirements
41	Have NDE methods been applied correctly?		X			
42	Will a separate Acceptance Test Spec/Procedure be required?		X			
43	Have human factors engineering and operability been considered?		X			
44	Is an Operation and Maintenance Manual required? If so, have requirements been clearly identified?		X			
45	Are current operating documents (procedures, specifications, etc.) applicable to the design or are changes necessary?				X	
46	Does the design use engineered safety and operational protections to avoid an excessive risk-taking dependence on administrative infallibility?		X			
47	Are reliability requirements specified? If so, does the reliability analysis of the design meet the specified reliability requirements?		X			Through put defined and design life is 4 years
48	Is the equipment design adequate to implement the proposed maintenance philosophy?		X			
49	Has drawing tractability been provided?		X			

Appendix A

Project System/Component		Design Phase			Cognizant Reviewer
Item	Review Consideration	Yes	No	NA	Remarks
50	Has the need for safety analysis of this design been determined by Safety?	X			Hazards analysis review scheduled for April 20, 2000, complete
51	Is the equipment, system, or facility covered by an existing Safety Analysis Report? If not, complete the safety analysis in time to incorporate findings of the analyzed in the design.	X			In process
52	Does the design match the intended methods of operation of the system or facility?	X			
53	Is a single point failure analysis required?			X	
54	Do the design media, format, content, reproducibility, and quality comply with all applicable requirements (including Hanford Plant Standards and referenced codes and standards)? Are the drawings structured to meet the needs of users after project completion?	X			
55	Have availability of power requirements for the project been verified?	X			
56	Have requirements for providing as-built drawings been specified?	X			
57	Is the design in compliance with applicable regulatory requirements and/or FH regulatory commitments?	X			
58	Are design tolerances appropriate and applied in a cost-effective manner and are standard materials and material sizes used where practicable?	X			

Appendix A

Concurrence Sheet

Review Team Role	Reviewers Name	Company	Consensus		
			Yes	No	Initial
Chairman	Phil Ohl	Vista Engineering Technologies, L.L.C.	✓		PO 6/2/00
Project Manager	Frank Muller	Fluor Hanford	✓		FM 5/30/00
Project Design Authority	Don Precechtel	Fluor Hanford	✓		D.P. Precechtel 6/1/00
Facility Design Authority	Mike Langevin	Fluor Hanford	NA		No Action M. Langevin
Safety – Nuclear	Steve Peck	ARES Corporation	✓		SP 5/15/00
Safety- Environmental	Jerry Turnbaugh/ Rick Gant	Fluor Hanford	✓		JTG 5/25/00
Safety- Industrial	Bobby Cooper	CE&SE	✓		B.C. 6/1/00
Electrical Engineer	Bill Anderson	E2	✓		BA 25 May 00
Quality Assurance	John Diehl	Fluor Hanford	✓		John Diehl 6-1-00
Radiological Control	Christine Bullock	Fluor Hanford	✓		CB 6-13-00
KW Basin Operations	John Kimbrough	Fluor Hanford	NA		No Action
	David Bullock	Fluor Hanford	✓		DB 6/1/00
	Chris Thompson	BSI	NA		Comments received
DOE	Dale Splett	DOE	NA		No Action
Independent reviewer	Ray Hernandez	E2	✓		R.Hernandez 6/1/00

Individuals that have NA in "yes" column did not participate in the design review or have left the company prior to issuing this document.

APPENDIX B

REVIEW COMMENT RECORDS

**CONSISTING OF 35 PAGES
INCLUDING COVERSHEET**

1. Date April 11, 2000		2. Review No.	
3. Project No. A-2		4. Page 1 of 1	
5. Document Number(s)/Title(s) ECN 658025 Canister Cleaner System 105KW		6. Program/Project/Building Number Spent Nuclear Fuel Project/Sub Project A-2/105 KW	
7. Reviewer Debris Removal Subproject		8. Organization/Group Technical Integration	
9. Location/Phone MO293 A159 100K/376-3329		10. Agreement with indicated comment disposition(s) 11. CLOSED	
12. Comment Submittal Approval Organization Manager (optional)		13. Reviewer/Point of Contact Date 5-11-00	
14. Reviewer/Point of Contact Date 5-11-00		15. Disposition (Provide justification if NOT accepted).	
16. Reviewer/Point of Contact Date 5-11-00		17. Status	
1	Sheet 4 of 9 (H-1-80032, Sheet 3, Rev. 10): The High Pressure Pump at the motor control center enclosure (KI) calls for "200AF/200AT". This might not allow the pump to start. Suggest 250A or 300A (or MCP).	Accept	C
2	Page 8 of 9 (H-1-80036, Sheet 2, Rev. 11): Why do you show one existing circuit breaker feeding the three loads on drawing H-1-84475, Sheet 1, Rev. B?	Accept will modify to reflect system	C
3	Page 9 of 9: Should show size of conduit and cable.	Accept	C

A-6400-090.1 (1097)

REVIEW COMMENT RECORD (RCR)		1. Date	2. Review No.
		April 12, 2000	
		3. Project No.	4. Page 1 of 1.
		A-2	
5. Document Number(s)/Title(s)	6. Program/Project/Building Number	7. Reviewer	8. Organization/Group
COGEMA-C0105-ECAL-001, Rev. 1 CCS 480 VAC Calculations	Spent Nuclear Fuel Project/Sub Project A-2/105 KW	Debris Removal Subproject	Technical Integration
17. Comment Submittal Approval	10. Agreement with indicated comment disposition(s)	11. CLOSED	9. Location/Phone
	5-11-00 Date	5-11-00 Date	MO293 A159 100K/376-3329
Organization Manager (optional)	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted).
	13. Page 3: What is the low voltage (24V) used for? What is the disconnect horsepower rating used for? The time circuit breaker could be higher (250A) to allow for easier operations. Recommend using 250 kcmil THHN cables. This may change the minimum conduit size.		16. Status C
	14. Page 4: Since the pump has a SF of 1.15, the NEC allows for up to a 140% of FLA setting on the overloads. Recommend using a 250 amp circuit breaker of MCP.		C
	15. Page 5: The standard 200A circuit breaker may be too small for starting.		C
	16. Page 6: The reference, 1999 NEC Chapter 9 Table 8 is for direct current. Should use Table 9. This would give a voltage drop of 1.45% which is still acceptable. If 250A kcmil THHN cable is used, the voltage drop will like go down.		C

A-6400-090.1 (10/97)

1. Date		2. Review No.	
April 12, 2000			
3. Project No.		4. Page 1 of 1	
A-2			
5. Document Number(s)/Title(s)		9. Location/Phone	
COGENA-C0105-ECAL-002, Rev. 0 CCS 120 VAC Greenhouse Hoist Calculations		MO293 A159 i00K/376-3329	
6. Program/Project/Building Number		8. Organization/Group	
Spent Nuclear Fuel Project/Sub Project A-2/105 KW		Technical Integration	
7. Reviewer		11. CLOSED	
Debris Removal Subproject		<i>Franklin Davis</i> Reviewer/Point of Contact Date: 5-11-00 Author/Originator: <i>D. G. Gueathel</i>	
10. Agreement with indicated comment disposition(s)		14. Reviewer Concurrence Required	
5-11-00 Date <i>Franklin Davis</i> Reviewer/Point of Contact Author/Originator: <i>D. G. Gueathel</i>		15. Disposition (Provide justification if NOT accepted). Accept	
13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).		16. Status	
17. Comment Submittal Approval Organization Manager (optional)		C	
12. Item	1	Page 9: The value for k appears to be for direct current. Should use 1999 NEC Chapter 9 Table 9. This will not change the conclusion on the voltage drop.	

A-6400-090.1 (10/97)

REVIEW COMMENT RECORD (RCR)		1. Date April 12, 2000	2. Review No.
		3. Project No. A-2	4. Page 1 of 1
5. Document Number(s)/Title(s) COGEMA-C0105-ECAL-003, Rev. 0 CCS 120 VAC Greenhouse HEPA Ventilation Calculations	6. Program/Project/Building Number Spent Nuclear Fuel Project/Sub Project A-2/105 KW	7. Reviewer Debris Removal Subproject	8. Organization/Group Technical Integration
9. Location/Phone MO293 A159 100K/376-3329	11. CLOSED		
10. Agreement with indicated comment disposition(s) Date: 5-11-00 Reviewer/Point of Contact: <i>[Signature]</i> Author/Organizer: <i>[Signature]</i>	11. CLOSED Date: 5-11-00 Reviewer/Point of Contact: <i>[Signature]</i> Author/Organizer: <i>[Signature]</i>		
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted).
1	Page 3: From 1999 NEC Table 430-148, the 1.5 horsepower motor has a FLA of 20A not 15A. This will require a re-calculation.		Accept will re-calculate C
2	Page 9: The value for k appears to be for direct current. Should use 1999 NEC Chapter 9 Table 9. This will not change the conclusion on the voltage drop.		Accept will re-calculate C

A-6400-090.1 (10/97)

1. Date		2. Review No.	
April 10, 2000		A-2	
3. Project No.		4. Page 1 of 1	
A-2		MO293 A159 100K/376-3329	
5. Document Number(s)/Title(s)		7. Reviewer	
h-1-80032, Sheet 3, Rev. 10 (ECN 658025) K1 one line modification		Debris Removal Subproject	
6. Program/Project/Building Number		8. Organization/Group	
Spent Nuclear Fuel Project/Sub Project A-2/105 KW		Technical Integration	
10. Agreement with indicated comment disposition(s)		11. CLOSED	
5-11-00 Date <i>[Signature]</i> Reviewer/Point of Contact Author/Organizer		5-11-00 Date <i>[Signature]</i> Reviewer/Point of Contact Author/Organizer	
13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).		14. Reviewer Concurrence Required	
Sheet 4 of 9: The High Pressure Pump at the motor control center enclosure (K1) calls for "200AF/200AT". This might not allow the pump to start. Suggest 250A or 300A (or MCP).		Accept	
12. Item		15. Disposition (Provide justification if NOT accepted).	
1		C	

A-6400-090.1 (10/97)

REVIEW COMMENT RECORD (RCR)		1. Date	2. Review No.
		April 11, 2000	
		3. Project No. A-2	4. Page 1 of 1
5. Document Number(s)/Title(s) H-1-84462 Rev. C SNF KW Canister Cleaning System Sub Project A-2 Piping & Instrumentation Diagram	6. Program/Project/Building Number Spent Nuclear Fuel Project/Sub Project A-2/105 KW	7. Reviewer Debris Removal Subproject	8. Organization/Group Technical Integration
9. Location/Phone MO293 A159 100K/376-3329		10. Agreement with indicated comment disposition(s) Date: 5/11/00 Reviewer/Point of Contact: <i>Alvin E. Bridges</i> Author/Originator: <i>D. G. Grevedt</i>	
11. CLOSED		12. Comment Submittal Approval	
Organization Manager (optional)		13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated). Sheet 1: Equipment No., Instrument No. and Valve No. should have identification on each. When P&ID is further defined, IO numbers will be provided by FH.	
14. Reviewer Concurrence Required		15. Disposition (Provide justification if NOT accepted). Accept each vendor/fabricator is required to label the equipment they are supplying. SNF Project will provide the numbers after they receive a list of all the parts	
16. Status		C	

A-6400-090.1 (10/97)

REVIEW COMMENT RECORD (RCR)		1. Date	2. Review No.
		April 11, 2000	
		3. Project No.	4. Page 1 of 1
		A-2	
5. Document Number(s)/Title(s)	6. Program/Project/Building Number	7. Reviewer	8. Organization/Group
H-1-84463 Rev. B SNF KW Canister Cleaning System Sub Project A-2 Service Piping Plan	Spent Nuclear Fuel Project/Sub Project A-2/105 KW	Debris Removal Subproject	Technical Integration
17. Comment Submittal Approval	10. Agreement with indicated comment disposition(s)	11. CLOSED	9. Location/Phone
	Date: 5/11/00 Reviewer/Point of Contact: <i>Alvin E. Bridges</i> Author/Organizer: <i>D. G. Szwed</i>	Date: 5/11/00 Reviewer/Point of Contact: <i>Alvin E. Bridges</i> Author/Organizer: <i>D. G. Szwed</i>	MO293 A159 100K/376-3329
Organization Manager (optional)			
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted).
1	Sheet 1: Will piping supports be identified and located on this drawing?		Accept will add note to drawing
			16. Status
			C

A-6400-090.1 (10/97)

REVIEW COMMENT RECORD (RCR)				1. Date	2. Review No.
5. Document Number(s)/Title(s)		6. Program/Project/Building Number	7. Reviewer	3. Project No.	4. Page 1 of 1
H-1-84467 Rev. C SNF KW Canister Cleaning System Sub Project A-2 Greenhouse HVAC Arrangement		Spent Nuclear Fuel Project/Sub Project A-2/105 KW	Debris Removal Subproject	A-2	8. Organization/Group Technical Integration 9. Location/Phone MO293 AL59 100K/376-3329
17. Comment Submittal Approval		11. CLOSED			
Organization Manager (optional)		10. Agreement with indicated comment disposition(s) Still no Date Alicia E. Bridges Reviewer/Point of Contact D. R. Greenblatt Author/Originator		11. CLOSED Still no Date Alicia E. Bridges Reviewer/Point of Contact D. R. Greenblatt Author/Originator	
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted).	16. Status	
1	Sheet 1: Optional muffler should be used on HEPA when exhausted upward to minimize potential upscatter contamination in overhead facility area. What is Item 3? This penetration (?) is not shown on back panel (Detail 1/H-1-84471) or front panel (Detail 8/H-1-84471). The HVAC penetration on the front panel is not shown on Detail 4/H-1-84471.		Accept will specify a defusor is available for the HEPA discharge. Will be removed Accept revise drawings	C	
2	Sheet 2: Item 6 callout appears to be redundant.		Agree remove parts bubble	C	

A-6400-090.1 (10/97)

REVIEW COMMENT RECORD (RCR)			
1. Date April 11, 2000		2. Review No.	
3. Project No. A-2		4. Page 1 of 3	
5. Document Number(s)/Title(s) H-1-84470 Rev. C SNF KW Canister Cleaning System Sub Project A-2 Assembly & Details	6. Program/Project/Building Number Spent Nuclear Fuel Project/Sub Project A-2/105 KW	7. Reviewer Debris Removal Subproject	8. Organization/Group Technical Integration
9. Location/Phone MO293 A159 100K/376-3329		10. Agreement with indicated comment disposition(s) 11. CLOSED	
12. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).		13. Reviewer Concurrency Required	
14. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).		15. Disposition (Provide justification if NOT accepted).	
16. Status		17. Status	
1	<p>Sheet 1:</p> <p>No tolerances were identified for the dimensions on this drawing or H-1-84471.</p> <p>Items 43, 44 & 45 are not identified on this drawing.</p> <p>Add the cable, turnbuckle and clevis (identified on Sheet 4).</p> <p>Should items 9 & 10 have quantities of 15?</p> <p>In column -040, Items 11, 19, 20, 21 & 22 should have quantities of AR, 2, AR, AR, and AR, respectively.</p> <p>Items 13, 14 and 15 quantities should be in column -040 not column -020.</p> <p>Items 37 - 38, 50 - 58 quantities should be in column -020 not column -040.</p> <p>Items 23 & 24 should have quantities of 8 not 4.</p> <p>Zone 6D: Items 47 & 48 should be called out "2 PLACES". It is unclear what Item 18 is used for or how it is attached.</p>	<p>Accept tolerances will be added to notes of drawing</p> <p>43&44 add detail to call out door assembly. 45 add basket drawing to pit table drawing</p> <p>Accept add to parts list</p> <p>Not accepted correct as is</p> <p>Accept except 22 that is correct</p> <p>Accept</p> <p>Drawing correct as is</p> <p>Accept</p> <p>Accept add details to tank latch</p>	C

A-6400-090.1 (10/97)

REVIEW COMMENT RECORD (RCR) (continued)		1. Date		2. Review No.		
		April 11, 2000				
13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).		3. Project No.		4. Page 2 of 3		
		A-2				
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted).	16. Status		
2	<p>Sheet 2:</p> <p>Item 3: Item 35 should be called out for the angled beam and the beam it supports. Additionally, the item numbers for the bolted connection at the base of the angled beam should be called out. Sheet 3 should be Sheet 4.</p> <p>Item 4: Change note to identify Detail 15 on Sheet 4.</p> <p>Item 2: Should Detail 17 be 21 and Detail 21 be 17?</p>		Accept			C
3	<p>Sheet 3:</p> <p>Identify Detail 15 of H-1-84471 on the Bottom Side View.</p> <p>Detail 4: It is not clear what items 19, 20 & 21 are used for since only Item 11 is called out.</p>		Accept Accept will evaluate the detail numbers			C
4	<p>Sheet 4:</p> <p>Detail 7: 1/2" Plate should be called out as Item 36. Similarly, the 5/8-11UNC nut and bolt callouts should be identified by item numbers. Are washers used for the bolted connection? No hole size is specified for the 1/2" plate/beam connections.</p> <p>Zone 5E: Should the horizontal beam be W4X13.</p> <p>Check the Detail callouts for the correct sheet number.</p>		Accept Accept will add clarification			C
			Accept Accept Beam call out will be changed Accept evaluation on call out will be done.			

A-6400-090.1 (10/97)

REVIEW COMMENT RECORD (RCR) (continued)		1. Date	2. Review No.	
		3. Project No.	4. Page 3 of 3	
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted).	16. Status
	<p>Zone 7D-E: Detail 7 should be called out for the bolted connection at the angled beam base & the vertical beam it is attached to.</p> <p>Detail 8: If beam is welded to base plate (Detail 9), a weld callout is needed. The base plate holes don't match up with Sections F, G & H of H-1-84465, Rev. B.</p>		Accept	
			Accept add weld information	

A-8400-090.1 (10/97)

1. Date		2. Review No.	
April 11, 2000		A-2	
3. Project No.		4. Page 1 of 2	
A-2		MO293 A159 100K/376-3329	
5. Document Number(s)/Title(s)		7. Reviewer	
H-1-84471 Rev. C SNF KW Canister Cleaning System Sub Project A-2 Misc LEXAN Panel Details		Debris Removal Subproject	
6. Program/Project/Building Number		8. Organization/Group	
Spent Nuclear Fuel Project/Sub Project A-2/105 KW		Technical Integration	
17. Comment Submittal Approval		11. CLOSED	
Organization Manager (optional)		Date	
5/11/00		5/11/00	
Author/Originator		Author/Originator	
Alvira E. Budge		Alvira E. Budge	
Reviewer/Point of Contact		Reviewer/Point of Contact	
D. G. Greer		D. G. Greer	
12. Item		13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).	
1	Sheet 1: Identify Item 17 on Detail 1. Why is this the only Unistrut item called out? If it is only for reference purposes, perhaps it would be clearer if Details 1 - 5 from Drawing H-1-84470 were referenced instead. Detail 6: Items 5 - 10 should point to the port.	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted).
2	Sheet 2: Detail 9: It would be clearer if Details 27 & 28 were identified as applying to 1, 2, 3 or all sides.		Accept reference unistrut detail C
3	Sheet 3: Detail 17: Detail 6 should point to the long strip not the same item as Details 27 & 28. Detail 18: Identify Detail 26. Detail 19: Are there Unistrut pieces going horizontally on this detail? The side view seems to indicate this case; however, the front & top views do not. There appear to be more pieces for Detail 3 identified on this Detail than on Detail 20. Detail 21: Detail 26 should point to the long strip. Is the dimension "14 7/8" called out correctly?		Accept Accept Accept will add more information to detail Accept Dimension is 14 7/8 will make all matching sides the same C

A-6400-090.1 (10/97)

REVIEW COMMENT RECORD (RCR) (continued)		1. Date	2. Review No.		16. Status
		April 11, 2000	A-2 of 2		
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted).		
	Detail 22: Identify Detail 26. What is the dimension for Details 27 & 28?		Dimensions added to 27 and 28 Detail 26 identified		
4	Sheet 4: Item 29 should be called out for Details 29 through 37. Detail 32: The vertical dimensions (centerlines) for the holes need to be called out.		Accept	Accept	C
5	Sheet 5: Item 29 should be called out for Details 38 through 50. It appears that Details 42 & 44 are duplicate items. Similarly, Details 43 & 45 appear to be identical (mirror-images).		Accept	Not accepted they are correct Not accepted correct as is	C

A-6400-090.1 (10/97)

REVIEW COMMENT RECORD (RCR)		
1. Date April 11, 2000	2. Review No.	
3. Project No. A-2	4. Page 1 of 1	5. Location/Phone MO293 A159 100K/376-3329
6. Program/Project/Building Number Spent Nuclear Fuel Project/Sub Project A-2/105 KW	7. Reviewer Debris Removal Subproject	8. Organization/Group Technical Integration
9. Document Number(s)/Title(s) H-1-84472 Rev. C SNF KW Canister Cleaning System Sub Project A-2 Dip Tank Assembly & Details	10. Agreement with indicated comment disposition(s) 5/11/00 Date <i>Alvin E. Bridges</i> Reviewer/Point of Contact <i>D. G. Grechtel</i> Author/Originator	11. CLOSED 5/11/00 Date <i>Alvin E. Bridges</i> Reviewer/Point of Contact <i>D. G. Grechtel</i> Author/Originator
12. Organization Manager (optional)	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated).	
1	Item 2, Lid: The estimated weight of each lid is approximately 41 lbs. Suggest using a smaller gage material to reduce the weight the operator is required to lift. In the down position, can an operator reach the handle without some type of a tool? Is there sufficient room for an operator to grasp the handle? Possibly use a smaller diameter material?	14. Reviewer Concurrence Required 15. Disposition (Provide justification if NOT accepted). The lids will be modified to make them lighter and easier for operations to lift and lower Tools will be provide by the SNF project not the fabricator os the dip tank Yes no change C

A-6400-090.1 (10/97)

1. Date		2. Review No.	
04/13/00			
3. Project No.		4. Page	
A.2.A			

REVIEW COMMENT RECORD (RCR)

5. Document Number(s)/Title(s) CCS Design Package	7. Reviewer Ray Hernandez	8. Organization/Group SNF Projects	9. Location/Phone 100KJ
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11. CLOSED

17. Comment Submittal Approval:

Organization Manager (Optional) _____ Date _____

Reviewer/Point of Contact

Author/Originator

Reviewer/Point of Contact

Author/Originator

4/21
Date

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1.	Pump procurement Spec page 6 conductors - we should not use 12 AWG for 24V control wiring it should be 18 AWG		Accept	C
2.	Pump procurement Spec page 6 conductors - Do not use solid wire for power and lighting circuits. There is a waiver to 6430.1A which allows standard wire		Not accepted will use requirements as called out in DOE Order 6430.1A. Not Accepted - Per DOE Order 6430.1A #2-AWG is required.	C
3.	Pump procurement Spec page 6 conductors - conductors for control and instrumentation shall not be smaller than 14 AWG for 120Vac. This requirement should not be 12 AWG.		Accept	C
4.	DWG H-1-84475 electrical one line does not match ECN 658025 page 8. Disconnects are used on H-1-84475, ECN uses breakers		Accept	C
5.	ECN 658025 sheet 8 shows LTG-PNL-D breaker 1 as 20 amps, cal C0107-ECAL-003 page 5 shows HEPA as 25 amps		Accept	C
6.	Neither drawings nor ECN identify pump electrical feed wire size, # of conductors, type. Support identifying on ECN 658025		Accept	C
7.	Vendor information section has pump drawing, which is for a 610 model. If 150 HP motor is used then 608 model will be required to meet the 27 gpm flow rate.		Accept - new drawing received shows the correct call out for the pump.	C

1. Date Apr 13, 2000		2. Review No. 90%	
3. Project No. CCS Design		4. Page 1 of 7	

REVIEW COMMENT RECORD (RCR)

5. Document Number(s)/Title(s) CCS 90% Design Review	6. Program/Project/ Building Number	7. Reviewer P. Ohl	8. Organization/Group Vista Engineering	9. Location/Phone 375-3374
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10. Agreement with indicated comment disposition(s)
 11. CLOSED
 Date 4/21/00
 Reviewer/Point of Contact D. R. Guebert
 Author/Originator T. D. W.

17. Comment Submittal Approval:
 Date 4/21/00
 Reviewer/Point of Contact D. R. Guebert
 Author/Originator T. D. W.

Note: The following number key is used at the start of each comment (box 12)

1. Criteria/requirement deviation
2. Recommendations for improvement
3. Information only (typos, checking errors, etc.)
4. Applicable to a later design stage

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1	1. Criteria/requirement deviation Supporting Calculations: Include process time calculations and assumptions either directly or by reference.		Accepted will generate calculation/analysis to document flow through times.	C
2	How much water can drip off the canisters into the fixative tank before the fixative is impacted?		An analysis is being generated to provide basis for material choice and what the material is capable of with standing during normal operations	C
3	Check source for Lexan: Some grades and suppliers begin to yellow after ~ 2 E 6 rad. Tint packages are available to preclude problems. I was unable to locate info on radiation effects on neoprene.		The time dose study shows a total dose rate for the entire operation as 44 rem. The maximum dose the lexan could see if every canister cam up 100 mrem would be 370 rem. The performance specification SNF-5502 dose gives the criteria of 2E7 rem for the radiation levels. Even if the lexan yellow a little in the 4-year life it will not impact the operations of the system.	C
4	DWG 8-1-84463: Check routing of HP water supply lines to canister cleaner.		Complete and acceptable to project.	C
5	F&R Issues I-1 and I-2: Do these issues need to be explicitly addressed somewhere in the design documentation?		Yes they will be addressed in the operating procedures.	C

REVIEW COMMENT RECORD (RCR)		1. Date 14 April 2000	2. Review No.
		3. Project No. KW Canister Cleaner A.2.A	4. Page 1 of 5

5. Document Number(s)/Title(s) Definitive Design Report Spent Nuclear Fuel K West Canister Cleaning System	6. Program/Project/ Building Number Sub-Project A.2.A	7. Reviewer Chris Thompson	8. Organization/Group Bartlett Services INC /Operations	9. Location/Phone 531-0764 /372-1472
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10. Agreement with indicated comment disposition(s)
 CA [Signature] Reviewer/Point of Contact
 Date 4/21/00
 Author/Originator [Signature]

11. CLOSED
 CA [Signature] Reviewer/Point of Contact
 Date 4/21/00
 Author/Originator [Signature]

17. Comment Submittal Approval:

 Organization Manager (Optional)

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1	Drawing H-1-84470 sheet 3 detail 6 & 84471: It is not clear how the pass through assembly works to allow access to the inside of the greenhouse without exposing the personnel on the outside to an unknown level of contamination. What is the dimension of the items shown? It appears that the locking bar interferes with the operator or maintenance craft trying to work in the trunk portion of the greenhouse. This is especially a problem with maintenance trying to reach into the greenhouse and change out the nozzles; the locking bar appears to strike the craft in the chest. This design needs to be specifically approved by radiological control. Recommend it be relocated to the end of the greenhouse where material can be passed into the greenhouse without interfering with the workspace.	y	The project is reviewing the RadCon manual to determine if there are any requirements for an airlock pass through on a system that will have a door that will open to the basin with out an air lock. Relocate pass through port. Accept RadCon has reviewed and will concur with the design prior to issuing for fabrication.	W



REVIEW COMMENT RECORD (RCR)	
1. Date 14 April 2000	2. Review No.
3. Project No. KW Canister Cleaner A.2.A	4. Page 2 of 5

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
2	Drawing H-1-84468 Cleaning Fixture Assembly - How does the cleaning fixture interface with the drip tray assembly shown in drawing H-1-84473? The piping for the spray assembly shown on drawing H-1-84469 interferes with setting the cleaning fixture assembly on the drip tray for repair if necessary. This limits the maintenance options, if the nozzles become seized or stuck in some fashion then it will become necessary to enter the greenhouse and repair the cleaning assembly. The lid on the dip tank was designed strong enough to support a craft person doing this repair, trying to remove a stuck component from the cleaning assembly with it suspended from a hoist will be difficult.		The cleaning fixture can be laid down on its side. Modifications will be made to the guide funnel for easy access for nozzle change out. Modifications will be made to the cleaning station for pick points. Not accepted - the lid for the dip tank is required to provide a minimal seal to slow down the drying process of the fixative in-between operation of the system. The lids needs to be light enough that one operator can open and close through a glove port. If operations want to stand on the lid they will need to put something over the lid for additional strength and to prevent slipping. During Factory Acceptance testing the ability to work on the canister cleaning fixture will be simulated. This will include changing out a nozzle on the halo and on the mole. <i>Don inspect</i>	CF
3	Drawing H-1-84472 confirm that the dip tank top is strong enough for a maintenance person to stand on if necessary.	y	Not accepted. This is not a requirement for the dip tank lid. If operations want to stand on the lid they will need to put something over the lid for additional strength (planking) and to prevent slipping.	CF
4	Drawing H-1-84470 sheet 2 and 84471 detail 15 typical seal detail shows a plate that covers the existing grating. H-1-84467 shows grating between the drip tray and the dip tank and at the opposite end of the dip tank. Confirm that there is a plate that covers the existing grating and that it is not lexan. ^(m)	y	Accept Lexan will be changed to metal. Plate design will cover the existing grating.	CF
5	SNF-5430 Section 5.1 Modification to the design after the final design Approval of changes should include operations and radiological controls in addition to DA and Project Management. Section 5.4 requirements- It is not clear why the SNF Engineering AP's for design, testing and control of drawings are not referenced. In some cases these AP's are more restrictive than the HNF Pros. When the project is evaluated during ORR and MSA reviews it will be evaluated for compliance to the SNFP Engineering AP's not the HNF Pros. The SNFP AP's are the defined implementing documents for the HNF Pros.		Approval designator is the responsibility of the Design Authority per HNF-PRO-1819. AP EN-06-027 outlines process for verification of design documentation. Accept need to call out the appropriate Administrative Procedures.	CF

REVIEW COMMENT RECORD (RCR)	
1. Date 14 April 2000	2. Review No.
3. Project No. KW Canister Cleaner A.2.A	4. Page 3 of 5

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
6	<p>Greenhouse Specification section 2.2 Integrated System Testing – the specification states that the supplier shall develop and perform the integrated test. How does the greenhouse supplier have sufficient information to develop this integrated test? Recommend that COGEMA develop this test and provide to the supplier. (This comment may be disregarded if the new testing strategy changes this)</p>		Accept	20
7	<p>Construction Specification section 3.1 This section is general and addresses hard piped systems, there is a section that addresses the air system piping. I could not find anywhere the installation of the flexible piping/hoes installation is covered in the construction specification. This comment applies to the section on pipe hangers and supports also. These items do not appear to be addressed in section 11000 High Pressure Pump Skid, Greenhouse and Accessories installation either. Section 3.1 a. states install per drawings – the drawings do not address the flexible hose supports, testing, flexible piping joint make up requirements.</p> <p>In general there is a lack of detail on the installation of the equipment – recommend adding the vendor manuals for installation of the High Pressure Pump skid and accessories. Section 11000 addresses labeling – won't the components come from the vendor with labels LAW EN-6-005?</p> <p>It is not clear what post installation testing of the High-Pressure Pump skid and accessories is required. No testing identified in section 15050 New comments from submittal 4/13/00 follow</p>		<p>Accept add to Section 3.1 in the Construction Specification to provide HP hose information.</p> <p>Accept Vendors will supply labeling, project will supply numbering scheme.</p> <p>Not Accepted this requirement is covered by Start up Testing. PATs Correct</p>	20
8				

REVIEW COMMENT RECORD (RCR)	
1. Date 14 April 2000	2. Review No.
3. Project No. KW Canister Cleaner A.2.A	4. Page 4 of 5

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
9	<p>Procurement Specification High Pressure Pump Skid and Accessories</p> <p>Section 2.1 OCS Page 2 of 16 – Air operated on/off control for safe shut down of console for operation and maintenance.</p> <p>The vendor drawings show an air line with a simple disconnect going to the console. An additional air operated valve to control the supply air is a complexity not needed. Recommend using a manual valve or a quick disconnect to remove service air from the control console.</p> <p>Exterior/interior spray nozzle assembly; the discussion states that nozzle sizes shall be adjustable for changes made during field-testing; recommend that the wording be changed to state that the nozzles be interchangeable in the field to allow for changing nozzle sizes/patterns. Or similar words.</p> <p>Section on radiation – what do we expect the vendor to do with this section.</p>		<p>Accept delete</p> <p>Accept</p> <p>Accept delete section</p>	
10	<p>Section 2.1.4 System Operations page 4 of 16</p> <p>Recommend clarification to the words</p> <p>Additionally, the pump skid may be operated as follows;</p> <ol style="list-style-type: none"> 1. operate 24 hours or 2. operate intermittently 2 hours per day, one day per week 3. capable of being shut down for 30 days without the need for special lay-up <p>Noise from HPPS during start-up and operation shall not exceed 85db - how are we going to show this- what is the current base line in the chiller bay and how will the HPPS interact with the facility. Recommend that the specification be clearly identified to the exact location of the 85DB and that it be measured at the vendors test site.</p>		<p>Accept</p> <p>Accept FAT in vendor shop for 85 bd. During the PAT we will evaluate the whole basin noise level.</p>	

REVIEW COMMENT RECORD (RCR)

	1. Date 14 April 2000	2. Review No.
	3. Project No. KW Canister Cleaner A.2.A	4. Page 5 of 5

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
11	Section 2.1.6 Materials and Components Equipment that will be located in the basin should be fabricated from stainless steel or coated with a coating that will facilitate decontamination - Need to ensure that these words do not drive the vendor to using a stainless housing with stainless nozzles that are prone to galling.		Accept change wording	CS
12	Page 7 of 16 OCS - tolerance of +/- 6 inches appears excessive- check and verify this in not a typo Hand Wand - ASME B31.1 Is applied to the hand wand- it is not clear that B31.1 should be applied to the hand wand.		Accepted the tolerance will be changed to +/- 3 inches. Accept changes made to request spec for review and approval by project	CS
13	Page 8 of 16 Table 1 By Vendor Male-Camlock By vendor - recommend the vendor be supplied with the specific data on the currently installed fitting. Nozzle arrangement shall provide complete coverage of all surfaces to be cleaned with a minimum of 7.5 degree of overlap between nozzles. Each cleaning cycle shall use a minimum of six cleaning nozzle's for 100 percent coverage- this section is overly specific. The performance requirement is that the canisters be cleaned to 100 mrem/hr. Why are we providing the detailed design information? Recommend; Nozzle arrangement shall provide complete coverage of all surfaces to be cleaned.		Accept will provide information to vendor. Accept will incorporate change	CS

1. Date 4/10/00		2. Review No. []	
3. Project No. []		4. Page 1 of 2	
5. Document Number(s)/Title(s)		9. Location/Phone	
CCS 90% Design Review		MO-10277376-2473/85-5857	
6. Program/Project/Building Number		8. Organization/Group	
KW Basin Canister Cleaning System		ALARA/RadCon	
7. Reviewer		11. CLOSED	
Christine Bullock		Reviewer/Point of Contact: <i>Christine Bullock</i> Date: <u>4/20/00</u> Author/Originator: <i>D. Q. Greenhalgh</i>	
10. Agreement with indicated comment disposition(s)		15. Disposition (Provide justification if NOT accepted.)	
17. Comment Submittal Approval: Organization Manager (Optional): _____ Date: <u>4/20/00</u> Reviewer/Point of Contract: <i>Christine Bullock</i> Author/Originator: <i>D. Q. Greenhalgh</i>		A design analysis will be prepared that defines the bases for the choice of fixative selected by the A.E. SNF-5502 calls out the requirements for the nozzle design. The design meets this criterion. Accept - will add the two hoists prevent cross contamination. This section refers to the current work practices not to future activities. No action. Not accepted - Tools referred here are for above water work used in construction. This is the appropriate section. Not accepted - Tools referred here are for above water work used in construction. Accept Accept	
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Reviewer Concurrence Required	16. Status
1	Section 9.0 ALARA, White Paper, General - No information is provided about the fixative and why it was selected versus other options. What were the other options? Same comment applies to the Lexan/Plexiglas.		C
2	Section 9.0 ALARA, White Paper, General - What about the decision on the nozzle choice and arrangement? How did you make that decision? That was ALARA based too, we didn't want to repeat the KE problems.		C
3	Section 9.0 ALARA, White Paper, General - You briefly mention the separate hoists. I'm not sure that it is very clear that this maintains cleanliness and reduces the spread of contamination.		C
4	Section 9.0 ALARA, White Paper, Section 2.1.2 - The above grating work area is currently a Radiological Buffer Area (RBA), below grating work area is currently a Contamination Area (CA). Work in the RBA may require protective clothing per the Radiological Work Permit (RWP). Remove the state about not needing protective clothing.		C
5	Section 9.0 ALARA, White Paper, Section 2.1.2, 2.2.2 - Sentences relating to the workers returning tools to the basin water if unexpected dose rates occur should be part of the Radiation Dose section.		C
6	Section 9.0 ALARA, White Paper, Section 2.3.2 - This evolution does not involve any below grating or water work so the reference to returning tools to basin if unexpected dose rates occur is not relevant.		C
7	Section 9.0 ALARA, White Paper, Section 3.5 - Remove the reference to teledetector probes. That hasn't been determined yet.		C
8	Section 9.0 ALARA, White Paper, Section 3.5 - The criteria for removing the canister is the High Radiation Area limit, not the disposal limit. This also is not a		C

A-6400-090.1 (11/99)

REVIEW COMMENT RECORD (RCR)		1. Date 4/10/00	2. Review No. <input type="checkbox"/>	
		3. Project No. <input type="checkbox"/>	4. Page 2 of 2	
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted.)	16. Status
	release limit.			C
9	Section 9.0 ALARA, White Paper, Attachment A - Need to explain the acronyms that are used.		This has been addressed, no action required.	C
10	Section 9.0 ALARA, White Paper, Attachment A - Where did the DAC limits come from on page 1		Requires information from generator	C
11	Section 9.0 ALARA, White Paper, Attachment A, Page 3 - This isn't complete.		Requires information from generator	C
12	Section 5.0 Design Documentation, Pump Skid Spec - The pump skid needs to have a catch pan for any water leakage.		The barrier encloses the skid. A drain is located in this area with the recirc pumps.	C
13	Section 6.0 Design Drawings, H-1-84460 - Remove the Cleanliness Verification prior to the Contamination Containment. The Contamination Assessment following the Contamination Containment also needs to include a dose rate.		Accept	C
14	Section 6.0 Design Drawings, H-1-84470, sheet 3 - I'm unable to determine the purpose of the detail 6 port.		This is a pass through port and can be located in any of the ports on the greenhouse.	C
15	Section 6.0 Design Drawings, Greenhouse Drawings - We asked for a pass through port near the transition to the transfer cart. I don't see it. I was looking for something similar to a miniature airlock (6"x6"). A lexan box with two doors, one into the greenhouse and one into the chiller bay.		The pass through port needs to be design for a single persons operation. The activity will only have one RPT working so that person will require some place to set the smears down while they get out of the glove port then pick it up when they open a pass through port. Need to incorporate this activity into the design.	C

REVIEW COMMENT RECORD (RCR)

1. Date 13 April 2000		2. Review No.
3. Project No. KW Canister Cleaner A.2.A		4. Page

5. Document Number(s)/Title(s) Definitive Design Report Spent Nuclear Fuel K West Canister Cleaning System	6. Program/Project/ Building Number Sub-Project A.2.A	7. Reviewer Carol Farwick	8. Organization/Group SNF Project	9. Location/Phone 531-7537/ 376-5655
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10. Agreement with indicated comment disposition(s)
 04/20/00 Date
 Carol Farwick Reviewer/Point of Contact
 D. G. Greenhalgh Author/Originator

11. CLOSED
 04/20/00 Date
 Carol Farwick Reviewer/Point of Contact
 D. G. Greenhalgh Author/Originator

17. Comment Submittal Approval:

 Organization Manager (Optional)

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1	H-1-84460 D3, 4 Cleanliness verification delete pass /fail there is no criteria to support this activity.		Accept	C
2	General Comment - Not clear as to whom is responsible for labeling. Need to specify that the vendor must supply labels with numbers obtained from the project.		Each vendor/fabricator is responsible for labeling. The SNF Project will provide numbers after the vendor provides a parts list.	C
3	H-1-84461 C6, 7 Show dimensions for each area of the wall that will be removed.		Accept	C
4	H-1-84468 Parts list change #13 to reflect the correct part		Accept - check 12, 13, 14, and 15	C
5	H-1-84468 Parts list #20 is not marked on sheet 4.		Accept part 20 is removed	C
6	H-1-84471 reference from panel details on sheet 1 to Lexan hole and structural arrangements on sheet 4, panels 32, 33, and 29 are flipped 180 degrees or mirror images.		Accept	C
7	H-1-84471 sheets 1,2 and 3 change "details" that represent each panel to "panel assembly". Everything is called a detail which makes this difficult to review		Accept change to panel details	C
8	H-1-84470 sheet 2, clarify what the TYP Seal Detail is and where it is located in the design. Evaluate #15 "detail" conflicting information, is it the panel on the grating not attached to anything or on the canister cleaning stand.		Accept add a parts bubble	C
9	H-1-84470 sheet 4 change detail #15 to something else that is not used.		Accept	C

REVIEW COMMENT RECORD (RCR)	
1. Date 13 April 2000	2. Review No.
3. Project No. KW Canister Cleaner A.2.A	4. Page

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
10.	COGEMA-C-0105-PSPEC-001 section 2.1.1 HPPS wrong number for "Equipment Reliability" change from 3.1.5 to 2.1.5		Accept changes made to specification	C
11.	COGEMA-C-0105-PSPEC-001 section 2.1.1 second paragraph under HPPS where is drawing number D50-60780100 and what is the criteria for the tolerance.		Engineering judgement	C
12.	COGEMA-C-0105-PSPEC-001 section 2.1.1 first bullet under OCS why 2 outside cleaning control operations. Is the pressure drop so high that cleaning can not be accomplished with a single halo?		Part of conceptual design , final design will be completed by the vendor.	C
13.	COGEMA-C-0105-PSPEC-001 section 2.1.1. 3 rd and 6 th bullets under OCS why two emergency stop buttons? Delete one please or clarify.		One button for operations and maintenance the other is an emergency stop button. Accept changes made to specification	C
14.	COGEMA-C-0105-PSPEC-001 Exterior/Interior spray nozzle assembly Modify this section to reflect that the contractor will design the halo and build the canister cleaning station with interface being the station attachment to the canister cleaning support structure.		Accept changes made to specification	C
15.	COGEMA-C-0105-PSPEC-001 section 2.1.3 Power supply for HPPS 2 nd and 7 th bullets sound like the same thing delete one or clarify.		Accept changes made to specification	C

REVIEW COMMENT RECORD (RCR)	
1. Date 4/11/00	2. Review No. 90%
3. Project No. A.2.A	4. Page

5. Document Number(s)/Title(s) Design Review Package	7. Reviewer Carol C Farwick	9. Location/Phone 375-3374
6. Program/Project/ Building Number 105 KW Basin	8. Organization/Group SNF Project	

17. Comment Submittal Approval: 11. CLOSED

10. Agreement with indicated comment disposition(s)

Organization Manager (Optional) Carol C Farwick Reviewer/Point of Contact Date 04/20/00

D. R. Secor Author/Organizer Date 04/20/00

Carol C Farwick Reviewer/Point of Contact Author/Organizer

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1.	COGEMA-C-0105-PSPEC-002 Spec for greenhouse, section 4.0 calls out CMTRs but does not say on what. Referencing back to the greenhouse drawings, no reference to CMTRs. Need to call out this requirement for structural steel.		Accepted	C
2.	PSPEC-001 Section 4.0 Quality Requirements delete call out for NQA-1 and type out the requirements. The pump manufacture has an ISO9001 program that is acceptable to the project.		Accept - will rewrite to incorporate QA requirements with a note that says equivalent to NQA-1 applicable section.	C
3.	PSPEC-001 Section 2.1.6 Hand Wand delete "design per ASME B31.1 and add to approved vendor specification. Add to submittal list.		Accept	C
4.	PSPEC-001 Section 2.1.6 Exterior/Interior Spray Nozzle Assembly - Remove nozzle tips from SST call out and add to Special hardened nozzle tips should be used to extend nozzle life.		Accept	C
5.	PSPEC-001 Section 2.1.6 delete ASME B31.1 from nozzle halo design.		Add or equivalent with submittal for approval.	C
6.	PSPEC-001 Section 2.3.1 add notification to buyer two weeks before testing.		Accept	C
7.	PSPEC-001 Section 5.0 why do we need 15 copies of submittals?		Shotgun review	C
8.	PSPEC-001 add halo design specification to submittal list.		Accept	C

REVIEW COMMENT RECORD (RCR)			
1. Date 4/13/00	2. Review No. <input type="checkbox"/>	3. Project No. Sub project A.2.A	
5. Document Number(s)/Title(s) <input type="checkbox"/> Canister cleaning system Definitive Design Report	6. Program/Project/Building Number <input type="checkbox"/>	7. Reviewer David Bullock	8. Location/Phone MO-402/54/100K 373-6523
11. CLOSED			
17. Comment Submittal Approval: Organization Manager (Optional)	10. Agreement with indicated comment disposition(s) <i>D. G. Green</i> Reviewer/Point of Contact Date <u>4/20/00</u>	11. CLOSED <i>D. G. Green</i> Reviewer/Point of Contact Date <u>4/20/00</u>	12. Reviewer/Point of Contact <i>D. G. Green</i> Author/Originator
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted.)
1	HPPS spec. 5.0 2.1.1 OCS 4 th bullet -- Can the air operated valve be locked out?		This valve is deleted. The existing valve at the interface with the basin and the CCS project can lock out the system. C
2	Greenhouse spec. 2.2.1 Water utilities - Has anyone checked with IWTS about this pressure and flow rate?		Yes - per ICD - 042 C
3	Greenhouse spec. 2.2.1 Air utilities - Has anyone checked with the facility engineers about the air system by the Dummy elevator Pit?		Yes - per ICD - 236 C
4	H-1-84464 - It is not going to be easy to roughen the surface because it is a fixed contamination area.		Demolition done outside the painted area. If contamination is detected the work package will provide direction. Work is estimated to be done on mask. C
5	8.0 Safety - The project needs to revise the FHA.		Correct - the FHA will include this information during the next annual FHA up-date. C
6	9.0 ALARA 3.3 - What tools are required? Does this mean that Operations will provide the tools?		A tool list will be generated. C

1. Date April 13, 12000		2. Review No. KWCCS-FJM-1	
3. Project No. A.2.A		4. Page 1/	

REVIEW COMMENT RECORD (RCR)

5. Document Number(s)/Title(s) Const Spec. COGEMA-C0105-CSPEC-001, Rev. 0A	6. Program/Project/ Building Number KWCCS A.2A	7. Reviewer F. J. Muller	8. Organization/Group K Basin Project	9. Location/Phone M0-293/6-2619
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11. CLOSED

17. Comment Submittal Approval:

Agreement with indicated comment disposition(s)

4/20/00
Date

4/20/00
Date

Organization Manager (Optional)

F. J. Muller
Reviewer/Point of Contact
Author/Originator

F. J. Muller
Reviewer/Point of Contact
Author/Originator

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1	Add SECTION 01401 - QUALITY ASSURANCE. See ECN 611967 for example that can be tailored for this effort. Add all required inspections to the specific inspection/test matrix.		Accept	C
2	Add SECTION 01630 - PRODUCT OPTIONS AND SUBSTITUTIONS. See ECN 611967 for example that can be tailored for this effort.		Accept	C
3	Add SECTION 01300 - SUBMITTALS. See SNF-3004, Rev. 2 for example that can be tailored for this effort.		Accept	C
4	Add SECTION 01720 - PROJECT RECORD DOCUMENTS. See SNF-3112, Rev. 1 for example that can be tailored for this effort.		Accept	C
5	General Comment - All sections, paragraph 1.1.A need to revise to indicate that the drawings and the Div 1 spec sections are the only related documents that apply as the FFS construction contract does not contain any general provisions including General and Supplementary Conditions.		Accept	C
6	SECTION 03300 - CAST-IN-PLACE CONCRETE, PART 1.3 SUBMITTALS (page 03300-1): Add that the mix shall have mix design no. ACME 6441 submitted prior to delivery.		Accept add to Section 2	C

REVIEW COMMENT RECORD (RCR)	
1. Date April 13, 12000	2. Review No. KWCCS-FJM-1
3. Project No. A.2.A	4. Page 1/

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
7	<p>SECTION 03300 - CAST-IN-PLACE CONCRETE, PART 1.4 QUALITY ASSURANCE (page 03300-2): Add the following:</p> <p>C. Deliverable Documentation: The following documents and records, required by this section, shall be delivered to Construction Document Control in accordance with SECTION 01401 - QUALITY ASSURANCE, PART 1.1.1.2.</p> <p><u>DOCUMENT</u> <u>PARAGRAPH</u> <i>Pour Slip and Trip Tickets</i> <i>3.3A, 3.3B</i></p>		Accept	C
8	<p>SECTION 03300 - CAST-IN-PLACE CONCRETE, PART 3.7 PAINTING CONCRETE SURFACES (page 03300-4): Add "per SECTION 09900 - PAINTING".</p> <ul style="list-style-type: none"> Do we need joint sealing between new curb and existing floor? Do we need to add mil thickness to the Amercoat on the concrete? 		Accept	C
9	<p>SECTION 05500 - METAL FABRICATIONS, PART 3.1 FABRICATION AND INSTALLATION (page 05500-2):</p> <ul style="list-style-type: none"> Add the following to end of sentence in 3.1A: <i>Verify field dimensions and take filed measurements as necessary before fabrication. Provide miscellaneous bolts and anchors, supports, braces and connections necessary for completion of metal fabrications. Weld or bolt connections as shown on drawings.</i> 		Accept	C
10	<p>Section 05500 page 2, Add "per SECTION 05055 - EXPANSION ANCHOR INSTALLATION" to 3.1E. And add "per SECTION 09900 - PAINTING, to 3.1.G.</p>		Accept add Section 5500 for Hilti bolts	C
11	<p>Add SECTION 09900 - PAINTING. Sec SNF-3112, Rev. 1 for example that can be tailored for this effort.</p>		Accept add Section on painting	C

REVIEW COMMENT RECORD (RCR)	
1. Date April 13, 12000	2. Review No. KWCCS-FJM-1
3. Project No. A.2.A	4. Page 1/

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
12	SECTION 15050 - BASIC MECHANICAL MATERIALS AND METHODS, PART 3.3 PAINTING AND BRUSHING (page 15050-4): <ul style="list-style-type: none"> Add "per SECTION 09900 - PAINTING" to 3.3A. 		Accept add Section on painting	C
14	Need to add reference section and add the specific call out for the specific codes and standards that are referenced in the section. See section 09900 from SNF-3112, rev. 1, paragraph 1.1.1.2 for example.		Accept project will provide an example.	C

REVIEW COMMENT RECORD (RCR)

1. Date 13 April 2000	2. Review No.
3. Project No. KW Canister Cleaner A.2.A	4. Page

5. Document Number(s)/Title(s) Canister Cleaning System 90% design review	7. Reviewer John Diehl	9. Location/Phone MO401/373-4734
6. Program/Project/ Building Number	8. Organization/Group QA	

17. Comment Submittal Approval:

11. CLOSED

Organization Manager (Optional): _____ Date: 5/16/00

Reviewer/Point of Contact: _____ Date: _____

Author/Organizer: _____ Date: _____

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1	PSPEC-001 There are no cleanliness requirements/standards specified. Please specify.		Accept	C
2	H-1-84465 Notes on drawing indicate anchor bolt quantities are to match vendor provided mounts. Question where are the minimum requirements to meet Hanford standards/guidelines for anchorage of systems and equipment identified? I could find no references in PSPEC-001, 002 or on the drawings.		Accept Information will be added to both specs	C
3	H-1-84470 Please specify /identify the overall dimensional tolerance requirements for assembly and detail drawings.		Accept	C
4	H-1-84470 Materials list ASTM A325 does seem appropriate for part #s 17 and 18. Also the Type should be identified for part # 16		Accept call out the correct bolt materials	C
5	H-1-84470 Items 50 through 58 have no materials or reference call out. Have these been identified? Id so please specify.		Accept	C
6	General Reference Action items and open issues is there a formal tracking system established? If so please specify.		Yes the project has an action item data base.	C
7				
8.				
9.				
10.				

APPENDIX C

MEETING MINUTES FROM KICKOFF MEETING

**CONSISTING OF 4 PAGES
INCLUDING COVERSHEET**

MEETING MINUTES					Page 1 of 2																					
SUBJECT: Canister Cleaning System (CCS) Design Review Kickoff Meeting																										
TO: Distribution		BUILDING																								
FROM C. C. Farwick		CHAIRMAN N/A																								
DEPARTMENT-OPERATION-COMPONENT SNF Project – CCS	AREA 1100	SHIFT Days	DATE OF MEETING 4/03/00	NUMBER ATTENDING 14																						
<p>* In Attendance</p> <p>Design Review Team</p> <table> <tbody> <tr> <td>Bill Anderson</td> <td>Mike Langevin</td> </tr> <tr> <td>Christine Bullock *</td> <td>Frank Muller</td> </tr> <tr> <td>Dave Bullock *</td> <td>Dick Nelson * (MCE)</td> </tr> <tr> <td>Jerry Chiamonte * (COGEMA)</td> <td>Phil Ohl *</td> </tr> <tr> <td>Bobby Cooper *</td> <td>Jeff Osborn * (COGEMA)</td> </tr> <tr> <td>John Diehl</td> <td>Steve Peck *</td> </tr> <tr> <td>Carol Farwick *</td> <td>Don Precechtel *</td> </tr> <tr> <td>Ray Hernandez</td> <td>Robert Spang * (COGEMA)</td> </tr> <tr> <td>Tarlok Hundal * (COGEMA)</td> <td>Dale Splett</td> </tr> <tr> <td>John Irons * (COGEMA)</td> <td>Chris Thompson *</td> </tr> <tr> <td>John Kimbrough</td> <td>Jerry Turnbaugh</td> </tr> </tbody> </table> <p>Meeting was started at 2:10, with small attendance.</p> <p>Phil Ohl, Design Review Team Chairman, initiated introductions. Two meetings were announced, the first on Monday April 10, 7:30 AM, a pre-design review meeting to cover questions and additional information as required. The second meeting scheduled for April 20, 2000, is the design review meeting and will cover the dispositions to each comment and get concurrence that the design is complete and procurement or fabrication of equipment can be initiated.</p> <p>The attached slide presentation was presented by Phil Ohl. Floor was open to questions. Phil turned the floor over to Steve Peck to discuss Hazards Analysis for the CCS.</p> <p>Steve handed out information on the K Basins Hazard Analysis. The review team was asked to review the information and determine what categories are relevant to the design. During the design review meeting on April 20, 2000, the team will spend approximately 30 minutes to help prepare a hazards analysis for the CCS. The information obtained from the analysis will be incorporated into the K Basins Hazards Analysis, HNF-3960, Rev. 1.</p> <p>Jerry Chiamonte presented an overview of the design package. He pointed out in the executive summary there is a list of which chapters are to be reviewed and which are for information. He then turned the meeting over to John Irons who presented the design.</p>					Bill Anderson	Mike Langevin	Christine Bullock *	Frank Muller	Dave Bullock *	Dick Nelson * (MCE)	Jerry Chiamonte * (COGEMA)	Phil Ohl *	Bobby Cooper *	Jeff Osborn * (COGEMA)	John Diehl	Steve Peck *	Carol Farwick *	Don Precechtel *	Ray Hernandez	Robert Spang * (COGEMA)	Tarlok Hundal * (COGEMA)	Dale Splett	John Irons * (COGEMA)	Chris Thompson *	John Kimbrough	Jerry Turnbaugh
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Jerry Chiamonte * (COGEMA)	Phil Ohl *																									
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Tarlok Hundal * (COGEMA)	Dale Splett																									
John Irons * (COGEMA)	Chris Thompson *																									
John Kimbrough	Jerry Turnbaugh																									

MEETING MINUTES (Continued)

Page 2 of 2

John walked through the Process flow diagram, drawings H-1-84463 SNF KW Canister Cleaning System Sub-Project A-2 Service Piping Plan, and H-1-84469 SNF KW Canister Cleaning System Sub-Project A-2 Greenhouse Arrangement.

Questions/Answers:

- Will the lids stay on the table during the cleaning operations? *Yes the lids weigh between 8 and 15 lbs. apiece and the table has a lip on it.*
- Where is the water line on H-1-84463? *Approximately 12 inches above the bottom of the "elephant trunk" which is the part of the greenhouse that drops into the basin.*
- Is there a bottom to the greenhouse? *Yes, there is a bottom in that portion of the greenhouse that extends over the basin.*
- Have the hoses been chosen to accommodate the required bend radius for removal of the cleaning station for maintenance? *The hoses are attached to the bottom of the canister cleaner to allow easier removal from the basin into the greenhouse during maintenance.*
- What is the tolerance for the Lexan plates to accommodate modifications and expansion/contraction of the structure frame? *Panels have neoprene on edges to allow for flexibility of the joints.*
- Is the greenhouse a containment as described in DOE Order 6430.1A? *Not intended to be a containment per those requirements. The greenhouse was designed to keep the operations area as clean as possible to allow workers to wear the minimum amount of protective clothing to operated the system.*
The Design Authority will evaluate the requirements in 6430.1A and determine if we meet the requirements for a general service portable ventilation system.
- Question asked by the design team: The design requirement states that the system must be design to clean 10 canisters a day (24 hours). The requirement also states the system shall be design to clean 20 lids a day (24 hours). Does this mean 10 canisters or 20 lids? Or does this mean 10 canisters AND 20 lids per day? If the system is required to clean only one of the conditions then the drying times can be increased. *The system is presently designed to clean 10 canisters AND 20 lids a day (24 hours). Baffles added to the design for flow restriction to meet the 10 canisters and 20 lids a day can be removed if the requirement is clarified to mean either 10 canisters or 20 lids per day. The design Authority made the decision 10 canisters AND 20 lids a 24-hour day.*
- The question was asked about future demolition of the system and if a plan had been prepared to address this. *No plan, the system will stay in the basin after turn over to the D&D contractor.*

Design review team presented an issue with the preliminary calculations prepared for the fire loading of the system to meet the criteria in the K Basin Fire Hazard Analysis. The Lexan can burn hot enough to impact the basin structure. Design Authority took an action to resolve this issue. The Project personnel will make contact with the Basin Fire Protection Engineer, Stan Wallace.

Agenda
For
Canister Cleaning System
90% Design Review

- I INTRODUCTION
Design Review Team
Design Team
- II SCOPE
Schedule
Checklist
RCR
Courtesy Comments
- III Design Presentation
- IV WRAP UP
Thank You

APPENDIX D

**COVERSHEET FROM EACH PROCUREMENT SPECIFICATION
WITH DA CONCURRENCE**

**CONSISTING OF 5 PAGES
INCLUDING COVERSHEET**



COGEMA-C-0105-PSPEC-002, Rev 0

Procurement Specification Greenhouse For 100K West Basin Canister Cleaning System

Prepared for:
Fluor Hanford, Inc
P.O. Box 1000
Richland, Washington 99352

Prepared by:
COGEMA Engineering Corporation
P.O. Box 840
Richland, Washington 99352


Author:
J. Irons

Date Published:
April, 2000




COGEMA-C-0105-PSPEC-002, Rev 0

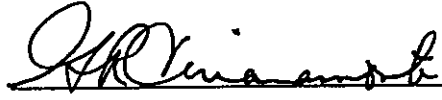
Procurement Specification Greenhouse For 100K West Basin Canister Cleaning System

Originator: 
J. Irons, Author

Date: 4/27/00

Approval: 
M.D. Rickenbach, Responsible Engineer

Date: 4/27/00

Approval: 
G.R. Chiamonte, Project Manager

Date: 4-27-00

Approval: 
Fluor Hanford

Date: 5/3/00

The Professional Engineer stamps and signatures below indicate review and approval of this procurement specification.





Procurement Specification High-Pressure Pump Skid and Accessories For 100K West Basin Canister Cleaning System

Prepared for:
Fluor Hanford, Inc
P.O. Box 1000
Richland, Washington 99352


Prepared by:
COGEMA Engineering Corporation
P.O. Box 840
Richland, WA 99352


Author:
J. Irons

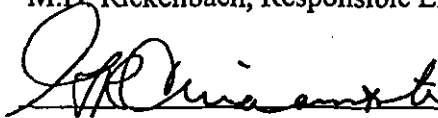
Date Published:
April, 2000




Procurement Specification High-Pressure Pump Skid and Accessories For 100K West Basin Canister Cleaning System

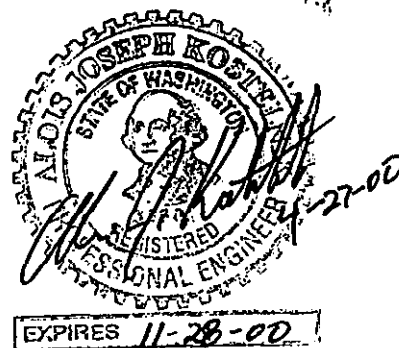
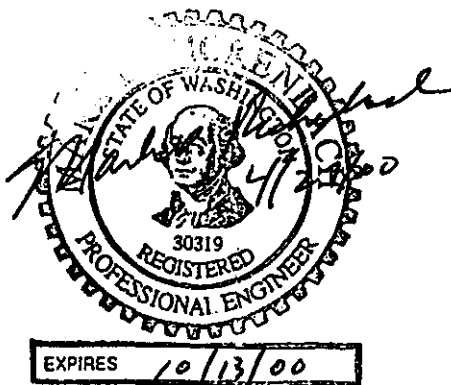
Originator:  Date: 4/27/00
 J. Irons, Author

Approval:  Date: 4/27/00
 M.D. Rickenbach, Responsible Engineer

Approval:  Date: 4-27-00
 G.R. Chiaramonte, Project Manager

Approval:  Date: 5/4/00
 Fluor Hanford

The Professional Engineer stamps and signatures below indicate review and approval of this procurement specification.



APPENDIX E

**COPY OF SIGNED EDTs FROM RELEASED DRAWINGS
AND CONSTRUCTION SPECIFICATION**

**CONSISTING OF 5 PAGES
INCLUDING COVERSHEET**

JUN 05 2000 (25) ✓
 Station 19 ENGINEERING DATA TRANSMITTAL
 Page 1 of 1
 1. EDT 629213

2. To: (Receiving Organization) SNF Project	3. From: (Originating Organization) Canister Cleaning System	4. Related EDT No.: N/A
5. Proj./Prog./Dept./Div.: Canister Cleaning System A.2.A	6. Design Authority/Design Agen/Cog. Engr.: D. R. Precechtel	7. Purchase Order No.: N/A
8. Originator Remarks: Approval for issue. UNDER PROJECT CONTROL DRP 6/1/00		9. Equip./Component No.: N/A
11. Receiver Remarks: 11A. Design Baseline Document? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No LSD: 6:00 0775 CF 6/3/00		10. System/Bldg./Facility: N/A
		12. Major Assm. Dwg. No.: N/A
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: ASAP

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 Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	H-1-84459	1&2	0	CCS Title Sheet	Q, S	1	/	/
2	H-1-84460	1	0	CCS Process Flow Diagram	"	1	/	/
3	H-1-84461	1&2	0	CCS Arch Demolition and Equipment Arrange Plans	"	1		
4	H-1-84463	1	0	CCS Service Piping Plan	"	1	/	/
5	H-1-84464	1	0	CCS Structural Plans and Sections	"	1	/	/
6	H-1-84465	1	0	CCS Structural Installation Section and Elevation	"	1	/	/
7	H-1-84476	1,2&3	0	CCS Raised Floor Platform Assembly, Section & Details	"	1	/	/

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) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN
	1	Design Authority	D.R. Precechtel	6/1/00	X3-85						
	1	Manager	CC Farwick	6-1-00	X3-85						
	1	PLE	CC Farwick	6-1-00	X3-85						
	2	QA	JL Diehl	5-25-00	X3-80						
	1	Safety	BC Cooper	5/29/00	X3-60						
	1	Operations	JA Kimbrough	6-1-00	X3-65						

17. C. C. Farwick Signature of EDT Originator Date: 5/22/00	18. F. J. Muller Authorized Representative For Receiving Organization Date: 5/22/00	19. D. R. Precechtel Design Authority/Cognizant Manager Date: 6/1/00	20. DOE APPROVAL (if required) Ctrl. No. N/A <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comment
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BU-7400-172-1

STA #19
 JUN 2 2000

 ENGINEERING DATA TRANSMITTAL

 Page 1 of 1
 EDT 629214

2. To: (Receiving Organization) SNF Project	3. From: (Originating Organization) Debris Removal Subproject	4. Related EDT No.: N/A
5. Proj./Prog./Dept./Div.: Canister Cleaning System (CCS) A.2.A	6. Design Authority/Design Agent/Cog. Engr.: D. R. Precechtel	7. Purchase Order No.: N/A
8. Originator Remarks: Release for work.		9. Equip./Component No.: N/A
		10. System/Bldg./Facility: 105 KW
11. Receiver Remarks: 11A. Design Baseline Document? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		12. Major Assm. Dwg. No.: N/A
USG-K-00-0726 5/11/00		13. Permit/Permit Application No.: N/A
		14. Required Response Date: ASAP

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 Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	SNF-6280	N/A	0	Construction Specification for 100 K West Basin Canister Cleaning System - Project A.2.A	Q, S ¹	1	1	1

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) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN
1		Design Authority	<i>D.R. Precechtel</i>	5/30/00	DR Precechtel X3-85						
1		Cog. Eng.	<i>M. J. Langevin</i>	5/30/00	MJ Langevin X4-01						
1		Manager	<i>F. J. Muller</i>	5/15/00	FJ Muller X3-85						
1		QA	<i>John D. Diehl</i>	5/25/00	JD Diehl X3-80						
1		Safety	<i>BC Cooper</i>	5/15/00	BC Cooper X3-60						
1		Operations	<i>JD Mathews</i>	6/1/00	JD Mathews X3-65						

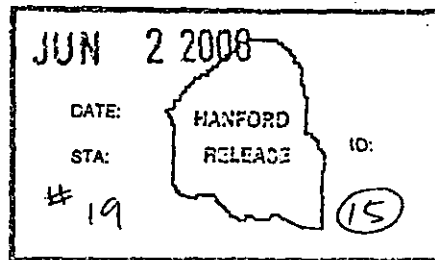
17. C. C. Farwick <i>C. C. Farwick</i> 6/1/00 Signature of EDT Originator	18. F. J. Muller <i>F. J. Muller</i> 6/1/00 Authorized Representative For Receiving Organization	19. D. R. Precechtel <i>D. R. Precechtel</i> 5/30/00 Design Authority/ Cognizant Manager	20. DOE APPROVAL (if required) Ctrl. No. N/A <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comment
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total pages 59

**SPECIFICATION FOR
100K West Basin Canister Cleaning System - Project A.2.A**

Building: 100KW

Project: A.2.A



Prepared By:

CC Farwick

Approved By:

Date

See EDT for Signatures

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

SNF-6280, Rev. 0



Construction Specification For 100K West Basin Canister Cleaning System

Prepare for:
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Prepared by:
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Mark D. Rickenbach

Date Published:
April, 2000