

Sta. 4 (E)

S

<b>2. To: (Receiving Organization)</b> Distribution	<b>3. From: (Originating Organization)</b> Fuel Retrieval Subproject	<b>4. Related EDT No.:</b> N/A
<b>5. Proj./Prog./Dept./Div.:</b> SNFP/FRS/A-07	<b>6. Design Authority/ Design Agent/Cog. Engr.:</b> E. J. Shen	<b>7. Purchase Order No.:</b> N/A
<b>8. Originator Remarks:</b> The attached Acceptance Inspection Plan is being submitted for approval and release.		<b>9. Equip./Component No.:</b> N/A
<b>11. Receiver Remarks:</b> 11A. Design Baseline Document? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  IP-E55317-C2-1		<b>10. System/Bldg./Facility:</b> 105K West
		<b>12. Major Assm. Dwg. No.:</b> N/A
		<b>13. Permit/Permit Application No.:</b> N/A
		<b>14. Required Response Date:</b> N/A

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted (AI PLAN)	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	IP-E55317-C2-1 HNF-2065 <i>1/2/98</i>		0	105KW Facility Modifications	a	1,2	2	

16. KEY		
<b>Approval Designator (F)</b> E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	<b>Reason for Transmittal (G)</b> 1. Approval    4. Review 2. Release    5. Post-Review 3. Information    6. Dist. (Receipt Acknow. Required)	<b>Disposition (H) &amp; (I)</b> 1. Approved    4. Reviewed no/comment 2. Approved w/comment    5. Reviewed w/comment 3. Disapproved 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	E. J. Shen	X3-75	<i>1/2/98</i>	3		N.T. Shaw	X3-75	*4 ea, advanced copies	
		Design Agent				3		K.S. Shaddix	X3-75	*1 ea	
		Cog. Eng.	<i>[Signature]</i>		<i>1/2/98</i>	3		J.L. Wise	X3-85	*1 ea	
1	1	Cog. Mgr.	J. E. Loomis	X3-85	<i>[Signature]</i>	3		D.G. Dunnum	E6-70	*1 ea	
1	1	QA G.M.	Davis	X3-80	<i>[Signature]</i>	3		FRS Working Files	X3-75	*1 ea	
		Safety				3		K Basins Files	X3-85		
		Reg. Eng.									

<b>18.</b> E.J. Shen <i>See Block 17</i> Signature of EDT    Date Originator	<b>19.</b> _____ Authorized Representative    Date for Receiving Organization	<b>20.</b> J.E. Loomis <i>See Block 17</i> Design Authority/ Cognizant Manager    Date	<b>21. DOE APPROVAL (if required)</b> Ctrl. No. <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comments
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# ACCEPTANCE INSPECTION PLAN 105KW FACILITY MODIFICATIONS FOR FUEL RETRIEVAL SUBPROJECT

E. J. Shen  
Duke Engineering & Services Hanford, Inc., Richland, WA 99352  
U.S. Department of Energy Contract DE-AC06-96RL13200

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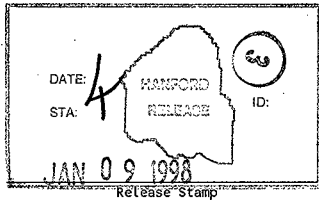
Key Words: Acceptance Inspection Plan, Fuel Retrieval Subproject, QA,  
K West

Abstract:

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Release Approval \_\_\_\_\_ Date 1/2/98



Approved for Public Release

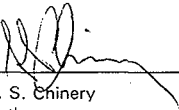
ACCEPTANCE INSPECTION PLAN  
105KW FACILITY MODIFICATIONS  
FOR  
FUEL RETRIEVAL SUBPROJECT

AI PLAN NO. IP-E55317-C2-1

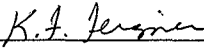
REVISION 0

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APPROVALS

  
G. S. Chinery  
Author

11/25/97  
Date

  
K. F. Feigner  
A. I. Manager

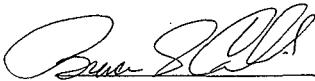
11/26/97  
Date

  
C. S. Cho  
DESH BTR

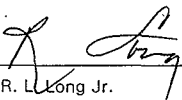
12-3-97  
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Department of Energy - RL - SFD

12/16/97  
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## GENERAL NOTES

The acceptance inspection of construction by Fluor Daniel Hanford (FDH) is performed to provide assurance that fabrication, construction, and installation are in accordance with approved contract documents. Approved contract documents used to perform inspections may include specifications, drawings, and contractor submittals such as fabrication drawings, procedures, etc. The amount or degree of inspection activity is tailored to the project as determined by the project team so that the effort and cost expended are commensurate with the importance of the facility in terms of function and safety. Inspections are documented to provide verification of the acceptability of the work performed.

This document identifies the inspections and documentation forms to be provided. It is prepared and implemented with the understanding that the construction contractor is fully responsible for compliance with contract documents and for the quality of work performed. Inspections performed are in accordance with approved procedures.

The Manager of Acceptance Inspection is responsible for the implementation of this plan and assignment of personnel for the work. Inspections are conducted by personnel who are qualified and certified to perform their assigned task.

The Acceptance Inspection Plan is organized in the Construction Specification Institute (CSI) format to cross reference design specification sections with sections of the AI Plan. In each AI Plan section the applicable specification section subject will be identified followed by the appropriate inspection requirements. General surveillances will be listed when applicable.

Acceptance Inspection Reports are provided to document inspections not documented on a test report (i.e. Soil Test Data, Concrete Test Report, NDE/Weld Record, Leak/Pressure Test Certification, Backflow Device Test Report, Nonconformance Report, Deficiency Report, and/or Contractors testing forms.)

**INSPECTION POINTS**

The FDH Acceptance Inspection initial contact for performance of Inspection Points listed below is Dave Frey at 372-2736. Names of assigned inspectors are provided during the initial contact.

**RECEIVING INSPECTION POINTS (R)** - Fabrications, equipment, and/or materials which have been selected for inspection by FDH upon arrival at a designated location, normally the jobsite. The contractor shall notify FDH Acceptance Inspection of the arrival of such items within four hours after receipt.

**WITNESS POINTS (W)** - Those activities in the sequence of construction which have been selected for inspection at the option of FDH Acceptance Inspection. The contractor shall notify FDH Acceptance Inspection at least twenty four hours (On-Site), or five days (Off-Site), in advance of scheduled activity. Work may proceed, however, upon verbal release by the FDH Acceptance Inspector, or upon the expiration of one hour past the scheduled time of activity.

**HOLD POINTS (H)** - Those activities in the sequence of construction which have been selected for mandatory inspection by FDH Acceptance Inspection. The contractor shall notify FDH Acceptance Inspection at least twenty four hours (On-Site), or five days (Off-Site), in advance of scheduled activity. Work shall not proceed until the Acceptance Inspector completes all necessary inspections.

INSPECTION POINT NO	INSPECTION POINT DESCRIPTION	INSPECT POINT	OFF SITE	ON SITE
<b><u>05055</u></b>	<b><u>EXPANSION ANCHOR INSTALLATIONS</u></b>			
05055-1	INSTALLATION OF EXPANSION ANCHORS	W		X
<b><u>05120</u></b>	<b><u>STRUCTURAL STEEL</u></b>			
05120-1	INITIAL WELDING	W		X
05120-2	LOAD TESTING OF MONORAILS	W		X
05120-3	INSTALLATION OF SUPPORT STRUCTURE FOR THE FUEL MANIPULATOR	W		X
<b><u>15493</u></b>	<b><u>CHEMICAL PROCESS PIPING SYSTEMS</u></b>			
15493-1	INITIAL WELDING	W		X
15493-2	LEAK/PRESSURE TESTING	W		X
<b><u>15500</u></b>	<b><u>HEATING, VENTILATION, AND AIR CONDITIONING</u></b>			
15500-1	LEAK/PRESSURE TESTING	W		X
<b><u>16400</u></b>	<b><u>SERVICE AND DISTRIBUTION</u></b>			
16400-1	ACCEPTANCE TESTING	W		X
16400-2	PRIOR TO ENERGIZING EQUIPMENT (NEC INSPECTION)	H		X

**GENERAL VERIFICATIONS AND SURVEILLANCES**

SPECIFICATION DIVISION 1 - GENERAL REQUIREMENTS	ACCEPTANCE DATE	CHECKLIST REQ
<p><u>SUSPECT/COUNTERFEIT PRODUCTS</u></p> <p>1. Surveillances have been conducted during construction activities to identify suspect/counterfeit products as described in Architectural Standard GG-DETE-01.</p>	<p>_____</p>	
<p><u>CHANGE CONTROL</u></p> <p>1. Changes to design documents have been accomplished in accordance with an approved ECN.</p>	<p>_____</p>	
<p><u>NONCONFORMANCE REPORTING</u></p> <p>1. Deficiencies or nonconforming items identified during the performance of Safety Significant work have been identified and reported in accordance with an approved procedure.</p>	<p>_____</p>	
<p><u>GENERAL OVERVIEW</u></p> <p>1. Perform surveillance inspection of construction activities to verify compliance to design documents in the following areas:</p> <ul style="list-style-type: none"> <li>- Expansion Anchor Installations</li> <li>- Structural Steel</li> <li>- Metal Fabrications</li> <li>- Painting</li> <li>- Piping Insulation</li> <li>- Chemical Process Piping Systems</li> <li>- Heating, Ventilation, and Air Conditioning</li> <li>- Supporting Devices</li> <li>- Service and Distribution</li> </ul>	<p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	

SPECIFICATION DIVISION 1 - GENERAL REQUIREMENTS	ACCEPTANCE DATE	CHECKLIST REQ
<p><b>PUNCHLIST</b></p> <p>1. Prepare the Official Project Punchlist.</p>	<p>_____</p>	
<p><b>OFFICIAL ACCEPTANCE</b></p> <p>1. A Final Inspection shall be performed on all safety significant installations, Equipment, and Components Constructed, Fabricated, Modified, or Installed, to verify that work and associated inspections have been completed and documented, and that all other requirements have been satisfied to allow testing and operation to begin (HNF-PRO-263).</p> <p>2. Sign the Acceptance of Completed Work form.</p>	<p>_____</p> <p>_____</p>	



**SPECIFIC INSPECTIONS AND TESTING**

SPECIFICATION DIVISION 5 - METALS	ACCEPTANCE DATE	CHECKLIST REQ
<p><u>EXPANSION ANCHOR INSTALLATIONS</u> - Spec. Sec. 05055</p> <p><b>W - INSTALLATION OF EXPANSION ANCHORS</b></p> <ol style="list-style-type: none"> <li>1. Perform overview of safety significant expansion anchor installation to verify conformance to design requirements.</li> <li>2. Review Expansion Anchor Installation Reports for final acceptance.</li> </ol>	<p>_____</p> <p>_____</p>	
<p><u>STRUCTURAL STEEL</u> - Spec. Sec. 05120</p> <p><b>H - INITIAL WELDING</b></p> <ol style="list-style-type: none"> <li>1. Verify welding procedures and operators are qualified in accordance with AWS D1.1.</li> <li>2. Review weld examination records for acceptance.</li> </ol> <p><b>W - LOAD TESTING OF MONORAILS</b></p> <ol style="list-style-type: none"> <li>1. Verify Monorail Assembly is fabricated and installed in accordance with approved design.</li> <li>2. Verify Monorail components are load tested to 125% of their rated capacity in accordance with DOE-RL-92-36, Section 12.11.1.</li> </ol> <p><b>W - INSTALLATION OF SUPPORT STRUCTURE FOR THE FUEL MANIPULATOR</b></p> <ol style="list-style-type: none"> <li>1. Verify installation of the fuel manipulator support structure and grating modifications are complete and conform to the requirements of ECN 634605.</li> </ol>	<p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	

SPECIFICATION DIVISION 15 - MECHANICAL	ACCEPTANCE DATE	CHECKLIST REQ.
<p><u>CHEMICAL PROCESS PIPING SYSTEMS</u> - Spec. Sec. 15493</p> <p><b>W - INITIAL WELDING</b></p> <ol style="list-style-type: none"> <li>1. Verify correct weld procedure utilized and welder's qualified/certified. _____</li> <li>2. Review Process Control Package for acceptance of documentation. _____</li> </ol> <p><b>W - LEAK/PRESSURE TESTING</b></p> <ol style="list-style-type: none"> <li>1. Perform random inspection of the following attributes:           <ul style="list-style-type: none"> <li>- Flushing has been performed. _____</li> <li>- Orientation and configuration is per design. _____</li> <li>- Correct support types and span. _____</li> <li>- All wall penetrations are sealed. _____</li> <li>- Flange bolts are tightened. _____</li> </ul> </li> <li>2. Witness (Spot check) leak/pressure testing and verify acceptability. Document on leak/pressure test certificate. _____</li> </ol>		
<p><u>HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)</u> - Spec. Sec. 15500</p> <p><b>W - LEAK/PRESSURE TESTING</b></p> <ol style="list-style-type: none"> <li>1. Perform random inspection of the following attributes:           <ul style="list-style-type: none"> <li>- Correct location of HVAC unit(s). _____</li> <li>- Bolted connections are tightened/torqued. _____</li> <li>- Firestopping systems installed. _____</li> </ul> </li> <li>2. Witness (Spot check) leak/pressure testing and verify acceptability. Document on leak/pressure test certificate. _____</li> <li>3. Verify refrigerant application during vacuum testing. _____</li> <li>4. Review Test and Balance Data Report, and Control system Functional Verification Report submitted by testing agency. _____</li> </ol>		

SPECIFICATION DIVISION 16 - ELECTRICAL	ACCEPTANCE DATE	CHECKLIST REQ
<p><u>SERVICE AND DISTRIBUTION</u> - Spec. Sec. 16400</p> <p><b>W - ACCEPTANCE TESTING</b></p> <p>1. Witness and/or record ATP.</p> <p><b>H - PRIOR TO ENERGIZING EQUIPMENT (NEC INSPECTION)</b></p> <p>1. After testing and reconnection, inspect installation for compliance to the National Electrical Code (NEC).</p>	<p>_____</p> <p>_____</p>	

**FINAL ACCEPTANCE SHEET**

The following service requirements have been completed and accepted. Only services identified in the inspection plan will be listed in the Final Acceptance Sheet.

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Feature	Initials	Date
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General Verifications and Surveillances

Specific Inspections and Testing

Metals

Finishes

Mechanical

Electrical

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AI MANAGER SIGNATURE

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DATE