

STA. # 2  
DFC 01 1994

18

ENGINEERING DATA TRANSMITTAL

1. EDT 608646

2. To: (Receiving Organization) ICF Kaiser	3. From: (Originating Organization) B-Plant Facilities	4. Related EDT No.: NA
5. Proj./Prog./Dept./Div.: 16530	6. Cog. Engr.: DW, MERTZ	7. Purchase Order No.: NA
8. Originator Remarks: The document establishes the criteria for acceptance tests to be performed on the installation of a new 4" raw water supply for the B-Plant fire foam system.		9. Equip./Component No.:
11. Receiver Remarks:		10. System/Bldg./Facility: B26A/221B/2B
		12. Major Assm. Dwg. No.: H-2-36905
		13. Permit/Permit Application No.: NA
		14. Required Response Date: NA

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	WHC-SD-WM-ATP-117		0	New Supply For Canyon Fire Foam System	SQ	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	4. Review	1. Approved	4. Reviewed no/comment
		2. Release	5. Post-Review	2. Approved w/comment	5. Reviewed w/comment
		3. Information	6. Dist. (Receipt Acknow. Required)	3. Disapproved w/comment	6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)													
(G)	(H)	(J) Name (K) Signature (L) Date (M) MSIN				(J) Name (K) Signature (L) Date (M) MSIN				(G)	(H)		
Reason	Disp.											Reason	Disp.
1	1	Cog. Eng.	<i>D.W. Mertz</i>	11/30/94	56-21								
2	1	Cog. Mgr.	<i>Kathleen G. Janney-Mills</i>	11/30/94	50-8								
1	1	QA	<i>[Signature]</i>	11/30/94									
		Safety	<i>[Signature]</i>	11/30/94									
		OSTI (2) 18-07											
		Or:real files (2) 18-04											

18. Signature of ED Transmitter <i>Tom Gandy</i> Date: 11/30/94	19. Authorized Representative Date for Receiving Organization	20. Cognizant Manager Date <i>Kathleen G. Janney-Mills</i> Date: 11/30/94	21. DOE APPROVAL (if required) Ctrl. No. <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comments
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## RELEASE AUTHORIZATION

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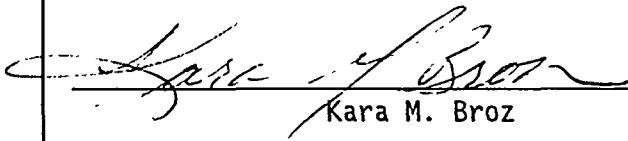
**Document Title:** New Supply For Canyon Fire Foam System

**Release Date:** December 1, 1994

**This document was reviewed following the  
procedures described in WHC-CM-3-4 and is:**

**APPROVED FOR PUBLIC RELEASE**

**WHC Information Release Administration Specialist:**

  
Kara M. Broz

December 1, 1994

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SUPPORTING DOCUMENT

1. Total Pages 5

2. Title

New Supply For Canyon Fire Foam System

3. Number

WHC-SD-WM-ATP-117

4. Rev No.

0

5. Key Words

Fire Foam  
NFPA Flush  
Pressure Test

*KMB 12/1/94*

**APPROVED FOR  
PUBLIC RELEASE**

6. Author

Name: T. Gainey

*Tom Gainey* *11/30/94*  
Signature

Organization/Charge Code 16530

7. Abstract

The raw water supply for the B-Plant Canyon fire foam system is being replaced. The 4" water supply line to the foam system is being rerouted from the 6" raw water line in the Pipe Gallery to the 10" raw water main in the Operating Gallery. This document states the acceptance criteria for the flushing and testing to be performed by the contractor.

8. RELEASE STAMP

OFFICIAL RELEASE  
BY WHC

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DATE DEC 01 1994

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The B-Plant canyon fire protection system consists of an automatically activated foam spray system, which is located in the Pipe Gallery. There is a 6" raw water line which runs the length of the Pipe Gallery; the foam system is supplied by a single 4" line from this header. Because of the age of the 6" pipe it has several places where it has been repaired. Also the 2" water suppression lines into the cells from the 6" header were found to have large amounts of debris, which in some cases completely blocks flow into the cells. To overcome these problems a new supply for the foam system is being installed directly from the 10" raw water main in the Operating Gallery. When this is done the 6" line will be abandoned in place.

This document provides the direction for acceptance of the work which will be performed in the course of installing a new 4" water supply to the fire foam system. (Work package 2B-94-0943/K)

It is the responsibility of the contractor performing the work (ICF Kaiser), to document the results of these tests; the ICF Kaiser Construction Engineer will sign the data sheet at the completion of each test. The WHC Cognizant Engineer will also be required to acknowledge the completion of each of these tests.

The contractor (ICF Kaiser) shall furnish all equipment and instruments required to perform the flushing and testing operations described herein.

The following is a detailed list of the specific tests which are to be performed during and after the installation of the new 4" supply line to the fire foam system. These tests may be conducted in any order, but all must be performed before WHC accepts the work as complete. The appropriate signatures are to be recorded on the supplied data sheet.

I. Operation of the Supervisory Position Indicator

The operation of the supervisory position indicator will be verified for the new 4" valve labeled 260-FIRE-1.

a) The test will be conducted by operating the 4" valve and observing the reaction of the alarm (VALVE TAMPER FOAM SPRAY) on the panel 221B FIRE ALARM CONTROL PANEL.

b) After the test has been conducted verify that the new 4" valve 260-FIRE-1 is in the full open position, and the alarm (VALVE TAMPER FOAM SPRAY) is cleared.

II. Hydrostatic Testing

A hydrostatic test of the new 4" supply line will be performed per NFPA-13, section 8-2.2, and documented on a Material Certification Record. This will be performed on sections of the piping which may be isolated for testing. As a prerequisite to hydrostatic testing; the new 4" supply line will be flushed, from the 10" raw water main to the location of the back flow preventer, until all construction debris are removed and the effluent is visually clean per ICF Kaiser QC personnel. ICF Kaiser will provide completed copies of Material Certification Record with the results of the tests.

III. Operation of the Backflow Preventer

The operation of the backflow preventer will be tested and documented per Washington State Health Department Cross Contamination Control Manual. ICF Kaiser will provide completed copies of data sheets from the Cross Contamination Control Manual with the results of the tests.

IV. Leak Check the System

As a final check, the entire system will be carefully inspected for leaks at all valves, and joints for a period of at least 2 hr. while the system is subject to operating pressure. This test is to be performed after all connections are permanently installed. After reviewing NFPA requirement 24:8-9.3.1, WHC Facilities Engineering and WHC PUREX/B-PLANT Safety Fire Protection Engineer WB Anderson agreed that this requirement will be satisfied.

V. Final System Flush

After all other tests have been performed a final flush of the entire new piping system will be conducted. This flush is to be performed with all system components installed and functional. Water is to be flushed from the 10" raw water header, through the flange where the new piping connects to the existing system near the foam tank, for at least 5 min. After the flush is complete, remove and clean the strainer in the 4" supply line. This flush is performed per the request of WHC PUREX/B-PLANT Safety Fire Protection Engineer WB Anderson who serves as the B-Plant Local Authority Having Jurisdiction for fire systems.

DATA SHEET

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I. Operation of the Supervisory Position Indicator

a) Proper alarm indication

Signature \_\_\_\_\_ Date \_\_\_\_\_

WHC Cog. Eng. \_\_\_\_\_ Date \_\_\_\_\_

b) Valve is placed in full open position and alarm is off

Signature \_\_\_\_\_ Date \_\_\_\_\_

WHC Cog. Eng. \_\_\_\_\_ Date \_\_\_\_\_

II. Hydrostatic Testing Successfully completed, and completed Material Certification Record attached

Signature \_\_\_\_\_ Date \_\_\_\_\_

WHC Cog. Eng. \_\_\_\_\_ Date \_\_\_\_\_

III. Operation of the Backflow Preventer tested, and completed data sheets form the Cross Contamination Control Manual attached

Signature \_\_\_\_\_ Date \_\_\_\_\_

WHC Cog. Eng. \_\_\_\_\_ Date \_\_\_\_\_

IV. Leak Check the System

Signature \_\_\_\_\_ Date \_\_\_\_\_

WHC Cog. Eng. \_\_\_\_\_ Date \_\_\_\_\_

V. Final System Flush and Cleaning of the 4" Supply Line Strainer

Signature \_\_\_\_\_ Date \_\_\_\_\_

WHC Cog. Eng. \_\_\_\_\_ Date \_\_\_\_\_