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Mr. John Grantham
State of Washington
Department of Ecology
Nuclear & Mixed Waste Program
P. O. Box 47600
Olympia, WA 98504-7600

FLUOR DANIEL, INC.

Date: September 16, 1994

Reference: Hanford Waste Vitrification Plant
DOE Contract DE-AC06-86RL10838
Fluor Contract 8457

Transmittal No.: WDOE-979

Dear Mr. Grantham:

TRANSMITTAL

We enclose 2 copy of the items listed below. These are issued per US-DOE request.

Response due to Fluor: N/A
Responds to: A160 PACKAGE

NUMBER	REV	DATE	TITLE
DCN - 0198	0	09/15/94	DCN TITLE: Revision of Operating Requirements for the Firewater Pumps PX-500-002 A/B "APPROVED FOR CONSTRUCTION"

Reference: FRP-1477, FUP-896

Distribution:

- R. L. Long: DOE-RL, w/0
- TWP/AME Corresp Cntrl Cntr, MSIN A5-10 (A160 PACKAGE), w/0
- P. Felise, WHC-RL (MSIN G6-06), w/1
- Environmental Data Management Center (MSIN H6-08), w/1
- D. Duncan, US EPA, Region X, w/0
- M.D. Talbot, WHC -w/0

Very truly yours,

Nazy Eshraghi For

R.S. Poulter
Project Director

RSP:DGL:nre



9513358.1137



FLUOR DANIEL

US DEPARTMENT OF ENERGY
HANFORD WASTE VITRIFICATION PLANT

DESIGN CHANGE NOTICE

DCN - 0198

REV 0

PAGE 1 OF 3

DCN TITLE

Revision of operating requirements for the Firewater Pumps PX-500-002A/B

DATE INITIATED

22 Aug 94

PACKAGE NO.

A160

SECTION 1: DESCRIPTION OF CHANGE

This DCN revises the operating requirements for the Firewater Pumps PX-500-002A/B. Previous requirements are and remain valid. This revision is being made to accommodate the reduced horsepower rating of the pump motors at 150% of rated flow.

Please note that the requirements of NFPA 20 Paragraph 3-2 as well as 6-5.2 apply to the pump and motor. In addition to other submittal requirements Factory Acceptance Test procedures as required by Paragraph 1.6.2.5 of Specification Section B-595-C-A160-15540 shall be provided for the revised operating requirements.

Design calculations as outlined in Paragraph 1.6.2.1 of Specification Section B-595-C-A160-15540 shall be provided for review.

CAUSE OF CHANGE:

- Field Change Request
- Supplier Disposition
- Deficiency Report
- Design Development
- Change Request
- TBD/Hold
- Other _____

Initiating Document(s)
EDN T3-030

SECTION 2: EVALUATION

	IF "YES", ADDITIONAL REVIEW REQUIRED BY:	REVIEWER COMMENTS AND SIGNATURE/DATE
WAPA DWG/SPEC? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	_____	_____
QUALITY LEVEL I DWG/SPEC? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	_____	_____
SAFETY CLASS 1 OR 2 DWG/SPEC? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	_____	_____
SYSTEMS ANALYSES AFFECTED? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES	<u>SYSTEMS</u>	<u>No Comment 9/15/94</u>
MULTI-DISCIPLINE CHANGE? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	Fire Protection	<u>No COMMENTS 9/15/94</u>
DCN Evaluated by: Systems <u>Patricia D... 9/15/94</u> ADM <u>James R. C... 9/15/94</u>		

SECTION 3: APPROVED FOR CONSTRUCTION

Donald G. DeBourgh 23 AUG 94 Date
Patricia D... 9/15/94 Date
 Project/Resident Engineer

SECTION 4: CONCURRENCE

Project Management _____ Date
 Systems _____ Date
 Independent Safety _____ Date
 Quality Assurance _____ Date
 Configuration Management _____ Date

SECTION 5: RELEASED FOR CONSTRUCTION

PE STAMP REQUIRED? NO YES

WHC _____ Date
 UCAT _____ Date
 DOE _____ Date

COMMENTS:

9513358.1138



FLUOR DANIEL

US DEPARTMENT OF ENERGY
HANFORD WASTE VITRIFICATION PLANT

DCN -0198

REV	DISCIPLINE	PKG. NO.	PAGE
0	Mech	A160	2

DESIGN CHANGE NOTICE

PREPARED BY: _____ Date: _____

DISCIPLINE ENGINEER: *Don LaBounty* Date: *9/16/92*

SECTION 6: CONSTRUCTION DOCUMENTS AFFECTED

DOCUMENT NUMBER	SHT/PAGE	REV NO	DOCUMENT NAME	INCLD Y/N	DESCRIPTION OF CHANGE
B-595-C-A160-15540, Attachment A	DS-2	1	Firewater System Pumps	Y	Revised Operating Conditions

SECTION 7: NON-CONSTRUCTION DOCUMENTS AFFECTED

This section references affected items such as P&IDs or calculations/analyses, but they are generally not included in DCN package.

DOCUMENT NUMBER	SHT/PAGE	REV NO	DOCUMENT NAME	DESCRIPTION OF CHANGE
H-2-123358	2	9	P&ID System 50: Fire and Process Water Storage	Revised Pump Operating Conditions



FLUOR DANIEL

U. S. Department of Energy
 Hanford Waste Vitrification Plant
 Richland, Washington
 DOE Contract DE-AC06-86RL10838
CENTRIFUGAL PUMPS

No.	BY	REVISION	SHEET NO.	REV.
	DATE			
△			A160-DS-2	1
△			DATE	CONTRACT
△			12-03-91	845734
△			TAG NO. PX-500-002A	
△			FX-500-002B	
△			SPECIFICATION SECT NO.	
△			15540	
△			FOR CLIENT USE	
△			ORIG	CHK'D
△			JN	CD
△			APPR'D	

ALL ITEMS SHALL COMPLY WITH GENERAL SPECIFICATION SHEETS: **A160-15540**

Service <u>FIRE WATER PUMPS</u>	No. Motor Driven <u>2</u>	No. Pumps Req. <u>2</u>
Pump Mfr. _____	Pump Tag No. <u>PX-500-002 A</u> <u>PX-500-002 B</u>	No. Turbine Driven _____
Size & Type _____	<u>FIRE WATER PUMPS</u>	Pump Tag No. _____
No. Stages _____	Motor Tag No. <u>SAME</u>	Turbine Tag No. _____
Serial No. _____	Motor Provided By <u>MANUFACTURER</u>	Turbine Provided By _____
		Turbine Mounted By _____

LIQUID	OPERATING CONDITIONS	SITE CONDITIONS
Name: <u>WATER</u>	Capacity (U.S. GPM): Normal <u>1450</u> Rated <u>1500</u>	Temp. (°F): Max. <u>110</u> Min. <u>60</u>
Pumping Temperature (°F): Normal <u>60</u> Max. <u>100</u> Min. <u>45</u>	Discharge Pressure (PSIG): <u>104</u>	Rel. Humid. (%): Max. <u>100</u> Min. <u>10</u>
Specific Gravity: @ <u>60</u> °F = <u>1.00</u>	Suction Pressure (PSIG): Max. _____ Rated <u>.74</u>	Altitude (Feet): <u>714</u>
Vapor Press. (PSIA): <u>0.256</u>	Differential Pressure (PSI): <u>103</u>	<input checked="" type="checkbox"/> Indoor <input checked="" type="checkbox"/> Heated <input type="checkbox"/> Roof
Viscosity (CP): @ <u>60</u> °F = <u>1.129</u>	Differential Head (Feet): <u>239</u>	<input type="checkbox"/> Outdoor <input type="checkbox"/> Unheated <input type="checkbox"/> Sun
Corrosion/Erosion Caused By: <u>NONE</u>	NPSH Available (Feet): <u>32</u>	Area Classification: _____
Remarks: _____	Hydraulic Power (HP): <u>90.5</u>	Other: _____
		Remarks: DCN-0198

PERFORMANCE (To Be Completed By Manufacturer)

Proposal Curve No.: _____	Minimum Continuous Flow (GPM): _____	NPSH Required (Feet Water): _____
Speed (RPM): _____	Thermal _____ Stable _____	3% Head Drop _____
Efficiency (%): _____	Max. Head Rated Imp. (Feet): _____	Suction Specified Speed: _____
Rated Power (BHP): _____	Max. Power Rated Imp. (BHP): _____	

CONSTRUCTION (To Be Completed By Purchaser and Manufacturer)

NOZZLES	SIZE	RATING	FACING	LOCATION	MISC. CONNECTIONS	SIZE	TYPE
Suction	8"	125	F. F.		Drain		
Discharge	6"	125	F. F.		Vent	1/2"	
					Pressure Gage		
					Warn Up		
					Balance Line		

Casing Mount: <input checked="" type="checkbox"/> Foot <input type="checkbox"/> Bracket	Impeller Diameter (Inches) Rated _____ Max. _____ Min. _____
Centerline <input type="checkbox"/> Near Cntrl. <input type="checkbox"/> Inline	Impeller Type: <input type="checkbox"/> Open <input checked="" type="checkbox"/> Closed
Casing Split: <input checked="" type="checkbox"/> Axial <input type="checkbox"/> Radial	Imp. Suction: <input type="checkbox"/> Single <input checked="" type="checkbox"/> Double
Casing Type: <input type="checkbox"/> Diffuser <input type="checkbox"/> Staggered	Imp. Mount: <input type="checkbox"/> Btwn. Brgs <input checked="" type="checkbox"/> Overhung
<input checked="" type="checkbox"/> Single Volute <input type="checkbox"/> Double Volute	Rotation (Coupling End): <input type="checkbox"/> CW <input type="checkbox"/> CCW
Max. Allowable Pressure (PSIG): At 60 °F _____	Bearing (Type/Number): Radial _____
At Norm. Pump Temp. _____	Thrust _____
Hydro Test Pressure (PSIG): _____	Coupling: Manufacturer _____
Lubrication Type: <input type="checkbox"/> API 614	Type/Model _____
<input checked="" type="checkbox"/> Grease <input type="checkbox"/> Ring Oil <input type="checkbox"/> Oil Mist	Driver Half-Coupling Mounted By: <input checked="" type="checkbox"/> Pump Mfr. <input type="checkbox"/> Driver Mfr. <input type="checkbox"/> Purchaser
<input type="checkbox"/> Flood <input type="checkbox"/> Flinger <input type="checkbox"/> Pressure	
Remarks: _____	

SECP1.FRM 07/06/92 FILE:A160CP1.REC.4 08/06/92 SAR = By Purchaser = By Mfr./ Purchaser Quench Flush Drain Vent