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FLUOR DANIEL

US DEPARTMENT OF ENERGY
HANFORD WASTE VITRIFICATION PLANT

DESIGN CHANGE NOTICE

DCN - 0192

REV 0

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DCN TITLE
Firewater pump permissive
start with partially closed
valves

DATE INITIATED
27 June 1994

PACKAGE NO.
A160

SECTION 1: DESCRIPTION OF CHANGE

This DCN revises the specification wording to state that the Fire Pumps (PX-500-002A/B) may start even if suction or discharge valves are not open. Previously approved specifications state that if either suction or discharge valve is not fully open, the pump shall not start.

FOR LIST OF AFFECTED DOCUMENTS, SEE SECTIONS 6 AND 7.

CAUSE OF CHANGE:

- Field Change Request
- Supplier Disposition
- Deficiency Report
- Design Development
- Change Request
- TBD/Hold
- Other Title III
Review

RTC-727
(Ref. EDN T3-017)
Initiating Document(s)

SECTION 2: EVALUATION

- WAPA DWG/SPEC? NO YES
- QUALITY LEVEL I DWG/SPEC? NO YES
- SAFETY CLASS 1 OR 2 DWG/SPEC? NO YES
- SYSTEMS ANALYSES AFFECTED? NO YES
- MULTI-DISCIPLINE CHANGE? NO YES

IF "YES", ADDITIONAL REVIEW REQUIRED BY:

REVIEWER COMMENTS AND SIGNATURE/DATE

DCN Evaluated by: Systems [Signature] ADM [Signature] Others [Signature]
Control Systems [Signature] *NO COMMENTS* [Signature] [Signature] [Signature]

SECTION 3: APPROVED FOR CONSTRUCTION

Originator Donald S. Sabanty Date 28 JUNE 94 Project Resident Engineer [Signature] Date 6/28/94

SECTION 4: CONCURRENCE

[Signature] 7-21-94
Project Management Date

[Signature] 7-21-94
Systems Date

[Signature] 7-21-1994
Independent Safety Date

[Signature] 7-25-94
Quality Assurance Date

[Signature] 7-21-94
Configuration Management Date

SECTION 5: RELEASED FOR CONSTRUCTION

PE STAMP REQUIRED? NO YES

[Signature] 7/28/94
WHC Date

[Signature] 7-21-94
UCAT Date

[Signature] 27 JUL 94
DOE Date

COMMENTS:

9513358.1013



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REV
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DISCIPLINE
Mech

PKG. NO.
A160

PAGE
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PREPARED BY: *Donald G. LaBounty*
D. G. LaBounty Date: 27 June 94

DISCIPLINE ENGINEER: *Donald G. LaBounty*
D. G. LaBounty Date: 27 June 94

DESIGN CHANGE NOTICE

SECTION 6: CONSTRUCTION DOCUMENTS AFFECTED

DOCUMENT NUMBER	SHT/PAGE	REV NO	DOCUMENT NAME	INCLD Y/N	DESCRIPTION OF CHANGE
B-595-C-A160-15540	11	1	Fire Water System Pumps	Yes	Revised wording of specification to state that partially opened or closed suction or discharge valves shall not inhibit the start of the fire water pumps. <i>REFER TO DCN-0153 REV. 3 FOR ADDITIONAL CHANGES TO SPECIFICATION 15540 RELATED TO THIS CHANGE.</i>

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
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N/A

- 4) Power Available indicating light.
- 5) Power Available auxiliary contact. This shall be wired to terminal blocks.
- 6) Low Discharge Pressure indicating light (PL-FWX-388B).
- 7) Terminal Block for external inputs.
- 8) High Pressure indicating light (PL-FWX-387B).
- 9) YC-FWX-383 Loop 287 logic.

Refer to Drawing H-2-121657, Sheet 1 for panel layout and nameplate descriptions.

B. Fire Water Pumps (PX-500-002A) [PX-500-002B]

The Fire Water Pumps are normally in auto standby mode while the fire water header pressure is being maintained by the jockey pump (PX-500-004). When the header pressure drops to 85 psig (PSL-FWX-018) [PSL-FWX-019] persistently for 15 seconds (KS-FWX-018), PX-500-002A starts automatically. If PX-500-002A is not available or low pressure persists for 20 seconds (KS-FWX-019) due to excessive demand, PX-500-002B starts automatically to supply the necessary water pressure. For each pump, if the suction valve switch (ZSL-FWX-012-1) (ZSL-FWX-012-2) or the discharge valve switch (ZSL-FWX-017-1) (ZSL-FWX-017-2) indicates the respective valve is closed, the respective alarm light for the suction valve (ZAL-FWX-012-1) (ZAL-FWX-012-2) or discharge valve (ZAL-FWX-017-1) (ZAL-FWX-017-2) will light. At the same time, an alarm horn on the outside of the pump house will sound. Also, pumps (PX-500-002A) [PX-500-002B] are inhibited from starting if their respective inlet and/or outlet valves are closed. An operator action is required to shutdown the pumps. The status of both pumps is indicated in the DCS (by Buyer).

DCN-0192

NOT

Seller shall furnish an FM-approved or UL-listed fire pump flowmeter. This flowmeter shall be of the averaging pitot tube-type. The fire pump flowmeter shall be used as a permanent installation to measure the fire pump flow performance.

The flow indicator shall have a 6 inch (minimum) dial, with a scale reading directly in GPM. The measurement accuracy shall be within ±1 percent over a scale range of 750 to 3000 GPM.

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