

Babcock & Wilcox

a McDermott company

Nuclear Power Generation Division

3315 Old Forest Road
P.O. Box 1260
Lynchburg, Virginia 24505
(804) 384-5111

January 13, 1981

Mr. Victor Stello, Director
Office of Inspection and Enforcement
United States Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Stello:

Pursuant to the requirements of 10 CFR 21 this report, in three copies, is made concerning lube oil coolers supplied on Makeup/High Pressure Injection Pumps for the Washington Public Power Supply System (WPPSS), Tennessee Valley Authority (TVA) and Portland General Electric (PGE) contracts. Attached is a listing with identification numbers of the pumps (Bingham-Willamette vendor) and a drawing of the heat exchangers (Ametek, Schutte & Koerting Division of Whitlock - Subvendor) involved.

The cause of this concern is that the head opposite the inlet and outlet piping connections of these makeup/high pressure pump lube oil coolers can be misoriented so that the coolers can have a 2-pass configuration instead of the intended 4-pass orientation.

The concern is that the vendor has confirmed that the change from the 4-pass to 2-pass configuration will reduce the heat exchange area of the coolers by 50%. This loss of 50% heat exchange surface when taken with maximum design cooling water temperature of 105°F could cause the lube oil temperature to exceed the maximum allowable temperature of 200°F resulting in possible loss of the high pressure injection function.

This concern has been judged reportable under the requirements of 10 CFR 21.

Examination of B&W records shows that the pumps were supplied with these heat exchangers on WPPSS, TVA and PGE contracts and to Power Authority of the State of New York (PASNY), a contract that has been cancelled. No other plants under construction and no operating plants have been supplied with these coolers on Makeup/High Pressure Injection Pumps.

50-460

50-518

50-432/39

50-514/15

Babcock & Wilcox

Mr. Victor Ste...o

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Corrective action consist of:

- Notification of affected licensees of this concern-completed.
- Addition of explicit warning about proper orientation of cooler heads in the pump instruction manuals - completed.
- Investigation through the pump vendor of the feasibility of making field changes to limit physically the position of the cooler head to the proper orientation for 4-pass configuration.

In the interest of thoroughness PASNY will also be notified by telecon of this concern even though it is a cancelled contract.

Mr. D. E. Guilbert, Vice President, Nuclear Power Generation Division of Babcock & Wilcox Company was informed of this reportable concern on January 8, 1981.

This letter confirms our telephone conversation of January 9, 1981 on the subject with G. W. Reinmuth of your office.

Very truly yours,

J. H. Taylor by *T. L. Baldwin*
J. H. Taylor
Manager, Licensing

JHT/fw

Enclosures - As stated

cc: Mr. D. E. Guilbert-Vice-President
Nuclear Power Generation Division

Mr. R. B. Borsum - Bethesda Representative

Mr. G. W. Reinmuth - NRC - Office of Inspection and Enforcement

PUMP IDENTIFICATION

Makeup & Seal Injection Pump

Washington Public Power Supply System, WNP 1 and 4

Vendor - Bingham-Willamette Co.

Pump - Type CP High Pressure Pump, 3 x 4 x 8½ 11-Stage Horizontal (Double Case)

WNP 1 (B&W Contract - 620-0023)

<u>B&W Mark No.</u>	<u>WPPSS Iden. No.</u>
MUP1A	1-MUS-PMP-1A
MUP1B	1-MUS-PMP-2B
MUP1C	1-MUS-PMP-3C

Bingham-Willamette Co. Serial No's. 230281, 230282, 230283

WNP 4 (B&W Contract - 620-0032)

<u>B&W Mark No.</u>	<u>WPPSS Iden. No.</u>
4MU-P1A	4-MUS-PMP-1A
4MU-P1B	4-MUS-PMP-2B
4MU-P1C	4-MUS-PMP-3C

Bingham-Willamette Co. Serial No's. 16210028, 16210029, 16210030

Tennessee Valley Authority, Bellefonte Nuclear Plant No. 1, Bellefonte Nuclear Plant No. 2

Vendor - Bingham-Willamette Co.

Pump - Type CP High Pressure Pump, 4 x 6 x 8½ 11-Stage Horizontal (Double Case)

Bellefonte No. 1 (B&W Contract - 620-0015)

<u>B&W Mark No.</u>	<u>TVA Iden. No.</u>
1-MU-P1A	1MPMP-001-A
1-MU-P1B	1MPMP-002-A
1-MU-P1C	1MPMP-003-B

Bingham-Willamette Co. Serial No's. 230286, 230287, 230288

Bellefonte No. 2 (B&W Contract - 620-0016)

<u>B&W Mark No.</u>	<u>TVA Iden. No.</u>
2-MU-P1A	2MPMP-001-A
2-MU-P1B	2MPMP-002-A
2-MU-P1C	2MPMP-003-B

Bingham-Willamette Co. Serial No's. 230291, 230292, 230293

Portland General Electric Company Pebble Springs

Vendor - Bingham-Willamette Company

Pump - Type CP High Pressure Pump, 3 x 4 x 8 $\frac{1}{4}$ 11-Stage Horizontal (Double Case)

Pebble Springs (B&W Contract - 620-0024)

B&W Mark No.

PGE Iden. No.

MU-P1A

P-205A

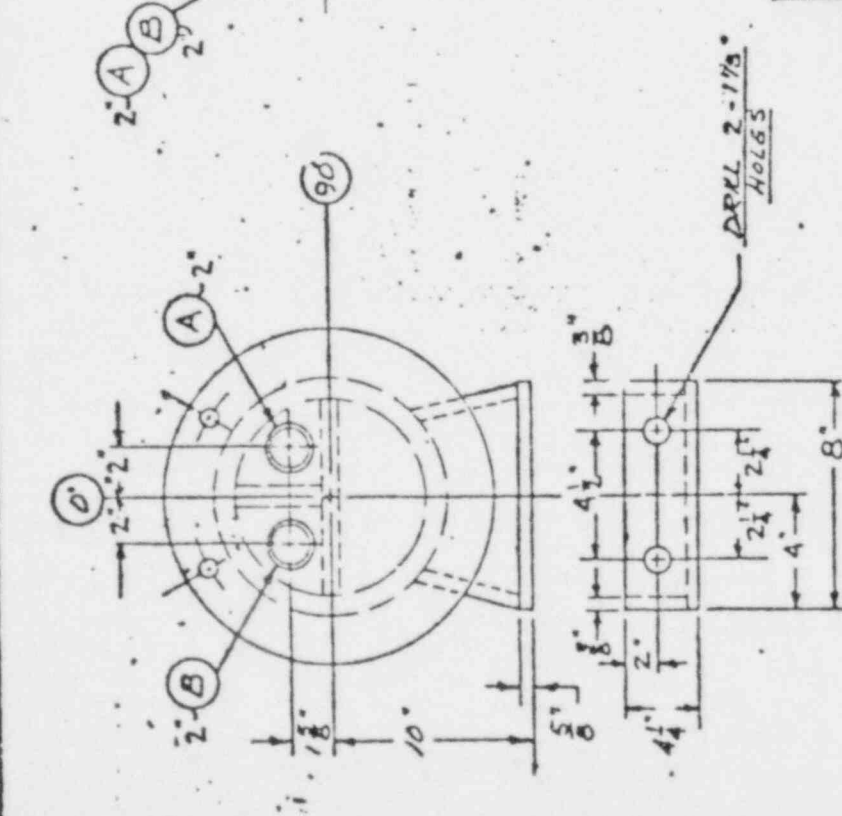
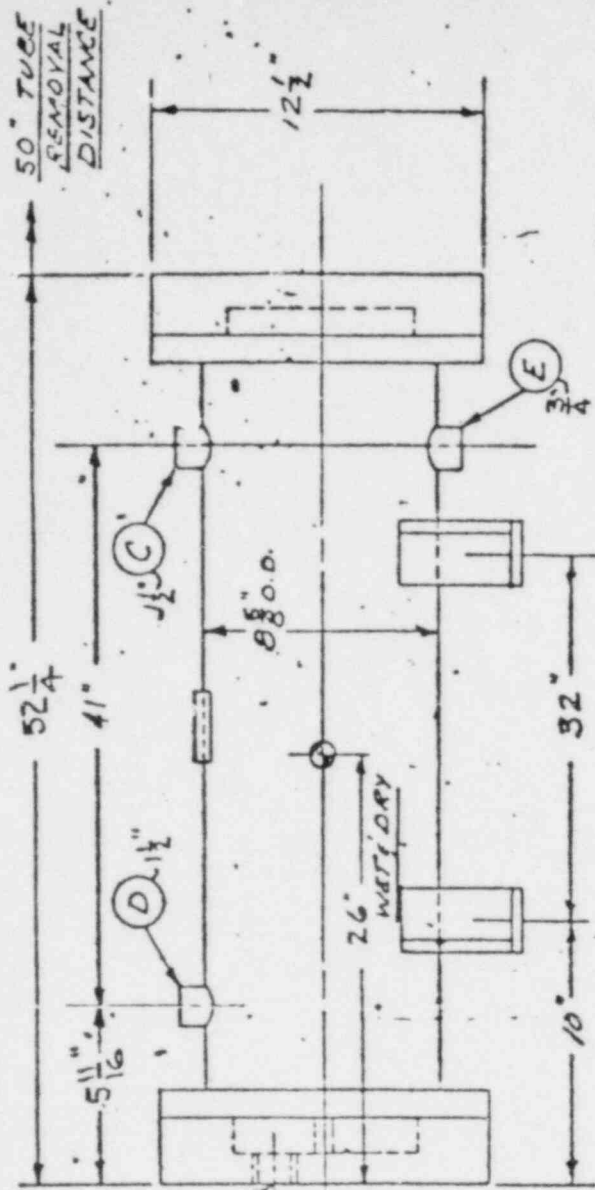
MU-P1B

P-205B

MU-P1C

P-205C

Bingham-Willamette Co. Serial No's. 230633, 230634, 230635



MATERIALS

DESIGN 508C E37.5
ADDENDUM E32.6.7
HYDRO PLOC E30.57
ADDENDUM E30.51.5

[illegible]

E	1/4" 6000 NPTCA	DRAIN
D	1/8" 6000 NPTCA	OIL OUTLET
C	1/2" 6000 NPTCA	OIL INLET
B	2" NPT TAP	WATER OUTLET
A	2" NPT TAP	WATER INLET
MARK	SIZE & RATINGS	FUNCTION

DESIGN, MATERIALS, FABRICATION, TESTING, AND
EXAMINATION IN ACCORDANCE WITH 1974 ED.
SECTION III, CLASS 3 ASME CODE, SUMMER
1974 ADDENDA, ITEM "C", AND STAMPED
"NOT"

2997000 710 30062
 515-4-1-5
 515-4-1-5

AMETEK, SCHUTTE & KOERTING DIVISION,
THE WHITLOCK PLANT, WEST HARTFORD, CONN.

[illegible]

PART 21 IDENTIFICATION NO. 81-343-000 COMPANY NAME Babcock & Wilcox
 DATE OF LETTER 1/13/81 DOCKET NO. 50-460/513; 50-436/439; 50-511/515
 DATE DICTATED 1/22/81 a.m. ORIGINAL REPORT ☒ SUPPLEMENTARY ☐

D. ACTION:

REACTOR (R) ☒

IE FILES

EES

REGIONS I,II,III,IV,V

VENDOR BR. R-IV

LOEB / MPA MNB 5715

AEOD MNB 7602

NRR/DOE

NRR/DSI

NRR/DST

NRR/DOL

ASLBP E/W 450

CENTRAL FILES 016

CENTRAL FILES (CHRON)

PDR

LPDR

TERA

FUEL CYCLE & ☐

MATERIALS (M)

IE FILES

AD/FF/MSI

REGIONS I,II,III,IV,V

VENDOR BR. R-IV

NWSS / FCMS SS-396

LOEB / MPA MNB 5715

AEOD MNB 7602

ASLBP E/W 450

SAP/SP MNB-7210A

CENTRAL FILES 016

CENTRAL FILES (CHRON)

PDR

LPDR

TERA

SAFEGUARDS (S) ☐

IE FILES

AD/SG

AD/ROI

REGIONS I,II,III,IV,V

VENDOR BR. R-IV

NRR/DOL

NWSS / SG SS-881

LOEB / MPA MNB 5715

AEOD MNB 7602

ASLBP E/W 450

CENTRAL FILES 016

CENTRAL FILES (CHRON)

CENTRAL FILES SS-396

PDR

LPDR

TERA

ACTION:

PRELIMINARY EVALUATION OF THE ATTACHED REPORT INDICATES LEAD RESPONSIBILITY FOR FOLLOWUP AS SHOWN BELOW:

IE ☒

NRR ☐

NWSS ☐

OTHER ☐

EES

NRC FORM 312
(12-78)SUMMARY DATA SHEET
(10 CFR - PART 21)

SECTION A - INITIAL DATA (Includes Elements 01 Thru 08)

GENERAL SUBJECT OF REPORT (CC 9-78)

Injection Pumps.

PART 21 IDENTIFICATION NO. (CC 1-8)

81343000

Deficiency of lube oil coolers supplied on Makeup High Pressure R

NAME OF LICENSEE, VENDOR, OR OTHER ORGANIZATION REPORTING (CC 79-148)

Babcock & Wilcox

NAME OF PERSON REPORTING (CC 149-173)

J. H. Taylor

DATE OF INITIAL NOTIFICATION

010981

DOCKET (CC 186-193)

05000460

DOCKET (CC 195-202)

05000513

DOCKET (CC 204-211)

05000438

DOCKET (CC 213-220)

05000439

DOCKET (CC 222-229)

05000514

DATE OF PART 21 REPORT

011381

(CC 231-238)

05000518

(CC 239)

-

(CC 240-247)

-

(CC 248)

-

(CC 249-256)

-

(CC 257)

-

(CC 258-265)

-

(CC 266)

-

(CC 267-274)

-

(CC 275)

-

RESPONSIBLE ORGANIZATION (CC 276-281)

ECI

SECTION B - CLOSEOUT ACTION (Includes Elements 09 Thru 27)

IE FOLLOWUP AND CLOSEOUT ACTIONS - CHECK OR PROVIDE DATA AS APPROPRIATE

LIST OTHER NRC OFFICES INFORMED

(CC 282-286)

-

(CC 287-291)

-

(CC 292-296)

-

(CC 297-301)

-

(CC 302-308)

-

CC-307

☐ DEFECT ☐ FAILURE TO COMPLY

DISCUSSED WITH INITIATOR?

(CC 308-310)

YES NO

PRESS RELEASE?

(CC 323-325)

YES NO

TRANSFERRED TO OTHER
NRC OFFICES?

(CC 335-337)

YES NO

DATE OF CLOSEOUT (CC 350-355)

MONTH DAY YEAR

REPORT REQUIRED FOR
PART 21?

(CC 311-313)

YES NO

INSPECTION?

(CC 326-328)

YES NO

ENFORCEMENT?

(CC 338-340)

YES NO

CIRCULAR ISSUED?

NUMBER

(CC 358-361)

YES NO

REQUEST FOR
ADDITIONAL
INFORMATION?DATE RECEIVED
(CC 314-319)

MONTH DAY YEAR

YES NO

REVIEWED FOR POTENTIAL
A/O (MC 1110)?

(CC 329-331)

YES NO

BULLETIN ISSUED?

(NUMBER)

(CC 341-348)

YES NO

LEVEL OF CLASSIFICATION

(CC 368)

C = CLASSIFIED
U = UNCLASSIFIED

INQUIRY?

(CC 320-322)

YES NO

INVESTIGATION?

(CC 332-334)

YES NO

CORRECTIVE ACTION
TAKEN?

(CC 347-349)

YES NO

DATE OF FINAL
REVIEW AND
DISTRIBUTION

(CC 369-374)

MONTH DAY YEAR

IE DOCKET/REPORT NUMBER(S)
(CC 375-386)

(CC 387-398)

(CC 399-410)

(CC 411-422)

(CC 423-434)

(CC 435-446)

(CC 447-458)

(CC 459-470)

(CC 471-482)

(CC 483-494)

ADDITIONAL COMMENTS

495

565

635

705

775

845

915

564

634

704

774

844

914

984