

BW/IP International, Inc.
Pump Division

Byron
Jackson/
United
Pumps

Wilson-
Snyder
Centrifugal
Pumps

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24 September, 1997

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

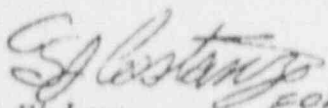
Notification Pursuant to Title 10, CFR, Part 21

Gentlemen:

This letter transmits a Notification of Defects and Non-conformance in accordance with the requirements of 10 CFR, Part 21. The attached Notification, CFRN 97-01, reports a condition which effects Emergency Service Water pumps supplied by BW/IP International, Inc. to GPU, Oyster Creek Nuclear Generating Station.

This transmittal completes the notification requirements on this issue.

Very truly yours,


W. Lane FOR W. LANE
Manager, Nuclear Products Operations

Attach.

cc: Part 21 Evaluation Board Members

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NOTIFICATION NO. CFRN-97-01

**NOTIFICATION OF A REPORTABLE
ISSUE PURSUANT TO 10 CFR 21**

DATE: 24 September 1997

TO: U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

NAME AND ADDRESS OF INDIVIDUAL INFORMING THE COMMISSION:

Mr. Woody Lane
BW/IP International, Inc
Pump Division
2300 East Vernon Avenue
Vernon, CA 90058
(213) 587-6171

For Technical Information Contact: Dr. Kent Huber
BW/IP Evaluation No. CFR 97-007

**IDENTIFICATION OF THE FACILITY, THE ACTIVITY, OR THE BASIC COMPONENT SUPPLIED FOR
SUCH FACILITY OR ACTIVITY WITHIN THE UNITED STATES WHICH FAILS TO COMPLY OR
CONTAINS A DEFECT:**

Facility: GPU Nuclear, Oyster Creek Nuclear Generation Station

Basic Component: Emergency Service Water Pump
BW/IP Model 16-GH 4-stage VTP

**IDENTIFICATION OF THE FIRM SUPPLYING THE BASIC COMPONENT WHICH FAILS TO COMPLY OR
CONTAINS A DEFECT:**

BW/IP International, Inc.
Pump Division:
2300 E. Vernon Avenue
Los Angeles, CA 90058

NOTIFICATION NO. CFRN-97-01**NATURE OF THE DEFECT OR FAILURE TO COMPLY AND THE SAFETY HAZARD WHICH IS CREATED OR COULD BE CREATED BY SUCH DEFECT OR FAILURE TO COMPLY:**

An Emergency Service Water pump failed during a site Operability Test. Inspection revealed the threaded flange attaching the column to the top series case had failed. Utility attributed failure to dissimilar metals: a cast iron flange was installed between a stainless steel column pipe and a stainless steel top case. Utility removed a second pump from service which had similar metallurgy.

Failure of the pump would preclude its ability to perform its intended safety function.

THE DATE ON WHICH THE INFORMATION OF SUCH DEFECT OR FAILURE TO COMPLY WAS OBTAINED:

BW/IP International, Inc., was informed of the flange failure on 21 August 1997.

IN THE CASE OF A BASIC COMPONENT WHICH CONTAINS A DEFECT OR FAILS TO COMPLY, THE NUMBER AND LOCATION OF ALL SUCH COMPONENTS IN USE AT, SUPPLIED FOR, OR BEING SUPPLIED FOR ONE OR MORE FACILITIES OR ACTIVITIES SUBJECT TO THE REGULATIONS:

GPU Nuclear, Oyster Creek Station, purchased eight pumps in which cast iron and stainless steel parts are in contact in a high ion application. Two pumps have been scrapped. The material compatibilities of the six pumps that are in operation at GPUN have either been corrected or are in the process of being corrected.

Initial evaluation indicates that this is an isolated incident limited to only this location. However, a review is being performed of the installed base of BW/IP pumps to identify the number and location of any other pumps in similar nuclear applications that may have material compatibility concerns.

NOTIFICATION NO. CFRN-97-01

THE CORRECTIVE ACTION WHICH HAS, IS BEING, OR WILL BE TAKEN: THE NAME OF THE INDIVIDUAL OR ORGANIZATION RESPONSIBLE FOR THE ACTION: AND THE LENGTH OF TIME THAT HAS BEEN OR WILL BE TAKEN TO COMPLETE THE ACTION:

BW/IP recommends that utility upgrade all pumps in high ion services to 316 stainless steel material and install isolation kits between the stainless steel column flange and the cast iron discharge head. Two pumps from the Oyster Creek station are currently in the BW/IP Service Center for refurbishment and materials upgrading. GPU has been advised to install isolation kits on two units which are currently in operation.

ANY ADVICE RELATED TO THE DEFECT OR FAILURE TO COMPLY ABOUT THE FACILITY, ACTIVITY, OR BASIC COMPONENT THAT HAS BEEN, IS BEING, OR WILL BE GIVEN TO PURCHASERS:

Pumps were purchased by GPUN in 1986 as commercial items not subject to 10CFR, Part 50, Appendix B or 10CFR, Part 21, requirements. GPUN subsequently designated the pumps as Safety-related equipment. The dedication process performed by GPUN established the original design as the design basis of the equipment for future safety-related purchases and repairs.

Pump was installed in a brackish water environment which caused corrosion of the top case flange. Based on inspection observations, BW/IP recommended, in 1993, that GPUN upgrade all pump components to 316 stainless steel. However, one pump, S/N 651-N-0748, was refurbished with GPUN supplied parts, as directed in the GPUN purchase order to support plant schedules, and returned to the site with a combination of C.I. and stainless steel materials.

In July 1997, the top case flange on one of the pumps experienced a total failure. Inspection showed a second pump also had similar materials of construction. Both pumps were removed from service and returned to BW/IP International for refurbishing.

GENERAL INFORMATION or OTHER

EVENT NUMBER: 32985

LICENSEE: BW/IP INTERNATIONAL, INC.
 CITY: LOS ANGELES REGION: 4
 COUNTY: LOS ANGELES STATE: CA
 LICENSE#: AGREEMENT: Y
 DOCKET:

NOTIFICATION DATE: 09/24/97
 NOTIFICATION TIME: 12:00 [ET]
 EVENT DATE: 09/24/97
 EVENT TIME: 08:55 [PDT]
 LAST UPDATE DATE: 09/24/97

NOTIFICATIONS

ELMO COLLINS RDO
 VERN HODGE (NRR) FEMA
 TOM MOSLAK (R1DO)

NRC NOTIFIED BY: W. LANE (VIA FAX)
 HQ OPS OFFICER: STEVE SANDIN

EMERGENCY CLASS: NOT APPLICABLE
 10 CFR SECTION:
 CCCC 21.21 UNSPECIFIED PARAGRAPH

EVENT TEXT

PART 21 NOTIFICATION

THE EMERGENCY SERVICE WATER PUMP, BW/IP MODEL 16-GH 4-STAGE VTP FAILED DURING A SITE OPERABILITY TEST AT THE OYSTER CREEK GENERATING STATION. AN INSPECTION REVEALED THAT THE THREADED FLANGE ATTACHING THE COLUMN TO THE TOP SERIES CASE HAD FAILED. THE UTILITY (GPU) ATTRIBUTED THE FAILURE TO DISSIMILAR METALS; A CAST IRON FLANGE WAS INSTALLED BETWEEN THE STAINLESS STEEL COLUMN PIPE AND A STAINLESS STEEL TOP CASE. BW/IP REVIEWED THE UTILITIES EVALUATION AND RECOMMENDED THAT ALL SUCH PUMPS IN HIGH ION SERVICES BE UPGRADED TO 316 STAINLESS STEEL MATERIAL.