

Washington Public Power Supply System

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509)372-5000

September 25, 1981

20-1-81-321

Mr. R. B. Faulkenberry
Nuclear Regulatory Commission
Region V
Suite 202, Walnut Creek Plaza
1990 N. California Boulevard
Walnut Creek, California 94696

Subject: NUCLEAR PROJECTS 1 AND 4
POTENTIAL 10CFR50.55(e)
BUFFALO FORGE FAN HOUSING MISSILE PROTECTION

- References:
- 1) Telecon CR Edwards, Supply System to P. Narbut, Region V Nuclear Regulatory Commission dated August 24, 1981.
 - 2) BFUE-81-5017, dated June 11, 1981, JA Cownie to DW Mazur
 - 3) UEWP-81-736, dated August 28, 1981, HC Grau to G.K Dyekman.

In reference 1) the Supply System informed your office of a potentially reportable condition under 10CFR50.55(e). In reference 2) the manufacturer of the subject fans, Buffalo Forge Company, identified to the Supply System a design deficiency associated with the missile protection characteristics of the fans supplied to WNP-1/4 under the guidelines of 10CFR21.

The Supply System's Project personnel, Quality Assurance and Engineering, have met to ascertain the reportability of the condition under the guidelines of 10CFR50.55(e). It was concluded that the information provided by Buffalo Forge was insufficient to conclusively determine the overall reportability of the condition, therefore the Project has opted to report this as a Potential 10CFR50.55(e).

UE&C Engineering has been chartered with the responsibility to evaluate the 10CFR Part 21 report, design data and the specification requirements to determine the effect this has on the original design for the fans in question and report their findings to the Supply System by December 28, 1981. The Supply System will evaluate UE&C's report and make the final determination as to the reportability of the condition by January 15, 1981.

Yours very truly

(Signature)

D. W. Mazur
Program Director
WNP-1/4

REGION V

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CR Bryant, Bonneville Power Administration/399
V. Stello - Director of Inspection and Enforcement - NRC
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ATTACHEMENT 1

Units WNP-1 and WNP-4

Docket Nos: 50-460 and 50-513

Potentially Reportable Condition 10CFR50.55(e)
Missile Penetration for Buffalo Forge Fans

INTERIM REPORT

Background

Buffalo Forge Company, notified the Supply System on June 10, 1981 (Attachment 3) of a deficiency in the fan housing design in regard to missile penetration in that it did not conform to the specification requirements. The manufacturer, Buffalo Forge Company, has reported the apparent design deficiency to the NRC under the guidelines of 10CFR Part 21 (attachment 3).

Description of Deficiency

The failure of fan housing to stop missiles generated in the radial direction in the event of interior component failure, including wheel and motor, could damage some safety related (SRA) equipment, should the latter be near by and in the missile trajectory.

At the present time it is not known which of the fans are affected and whether they impact SRA equipment.

Corrective Action

The Supply System has requested the Architect Engineer, United Engineers & Constructors, Incorporated, to evaluate the situation and make recommendations.

It is anticipated the design evaluation will be completed on or about December 28, 1981. When the recommendations/evaluations have been received from UE&C and reviewed by Supply System Engineering, a final report will be prepared and issued by January 15, 1982.

 **united engineers** & constructors inc.
30 South 17th Street
Post Office Box 8223
Philadelphia, PA 19101

BOSTON
DALLAS
ECHELON
KNOXVILLE
PHILADELPHIA
VALLEY FORGE

August 28, 1981
UEWP-81-736
File: 1.3.1

**FDCC FILE COPY
PLEASE RETURN**

Mr. G. K. Dyekman
WNP-1/4 Design Engineering Manager
Washington Public Power Supply System
3000 George Washington Way
Richland, Washington 99352

**R E I C E I V E D
U. E. & C.**

SEP 10 1981

**DOC. CONTROL CTR.
W. P. 1 & 4**

Washington Public Power Supply System
Supply System Nuclear Projects 1 & 4
Contract 9779-22
Buffalo Forge Company - Fans

- References: 1) BFUE-81-5017 (22) dated June 11, 1981
2) Buffalo Forge Company Letter to NRC
dated June 10, 1981
3) UEBF-81-005

Dear Mr. Dyekman:

Buffalo Forge Company's letter, reference 1 and 2, were reviewed and we directed them, per reference 3 letter, to send to UE&C a copy of their calculations used in their "Missile Penetration Analysis". Their suggested field modifications for the fans were also requested in reference 3 for UE&C review.

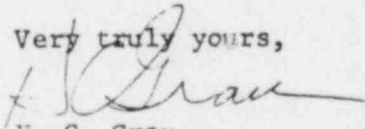
As soon as Buffalo Forge Company complies with our request, we will immediately review the situation and make our recommendations.

ACTION ITEMS

UE&C - To ensure that Buffalo Forge Company sends to UE&C requested data.

Supply System - None

Very truly yours,


H. C. Grau
Project Engineering Manager

HCG/MJD/epf

cc: V. Mani
C. R. Bryant

Handwritten notes and stamps:
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Buffalo Forge Company

P.O. BOX 985 Buffalo, N.Y. 14240

June 10, 1981

Director of Inspection Enforcement
Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. Victor Stello

Dear Mr. Stello:

On June 5, 1981, we made a telephone report to Mr. Robert Bear and Mr. William Mills which they considered to be our preliminary report under 10CFR Part 21. Our final report is as follows.

We have a number of contracts which specify that missile penetration analyses be performed. Those contracts for which we have either shipped all or part of the equipment are listed below. During the course of executing these contracts we performed the necessary missile penetration analyses and designed the equipment accordingly. Some of the contracts were for centrifugal fans while others were for axial-flow fans. New methods of calculation indicate thicker housings.

<u>Customer</u>	<u>Plant</u>	<u>Contract #</u>
Cleveland Elec. & Illum Co.	Perry 1 & 2	P-1189-S P-1120-S
Louisiana Power & Light Co.	Waterford 3	NY-403557 NY-403558
Dusquesne Light Co.	Beaver Valley 1 & 2	2BVS-177
Illinois Power Co.	Clinton 1 & 2	C-11487
Washington Public Power Supply System	WNP 1 & 4	9779-22
Washington Public Power Supply System	WNP 2	BR3900-101

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FOR MOTHER

EXECUTIVE OFFICES 490 BROADWAY BUFFALO, NEW YORK 14204 PHONE (716) 847-5121 TELEX 091234

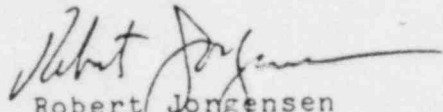
ALL ORDERS AND CONTRACTS ARE RECEIVED SUBJECT TO APPROVAL BY AN EXECUTIVE OFFICER OF THE COMPANY. SALES REPRESENTATIVES NOT AUTHORIZED TO BIND THE COMPANY. ALL AGREEMENTS CONTAINING UNUSUAL CLAUSES, CONDITIONS, AND OTHER CAUSES UNAVOIDABLE OR BEYOND REASONABLE CONTROL, QUOTATIONS SUBJECT TO CHANGE WITHOUT NOTICE. TYPEWRITING AND PRINTING ERRORS NOT BINDING.

Director of Inspection Enforcement
June 10, 1981
Page 2

We are not in a position to judge whether any missiles which might penetrate the housings would produce a condition which would be classified as a substantial safety hazard. We are notifying our customers who are in a position to determine this.

Very truly yours,

BUFFALO FORGE COMPANY
AIR HANDLING DIVISION


Robert Jorgensen
Director of Engineering

RJ:gkd

cc: Region I Director