

50-287

PART 21 IDENTIFICATION NO. 80-252-000 COMPANY NAME B+WDATE OF LETTER 7/11/80 DOCKET NO. numerousDATE DISTRIBUTED 7/18/80 ORIGINAL REPORT ☒ SUPPLEMENTARY ☐

DISTRIBUTION:

REACTOR (R) ☒FUEL CYCLE & ☐
MATERIALS (M)SAFEGUARDS (S) ☐

IE FILES

AD/ROI (2)

AD/RCI (2)

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

~~CENTRAL FILES 016~~

CENTRAL FILES (CHRON)

PDR

LPDR

TERA

IE FILES

AD/FFMSI

REGIONS I,II,III,IV,V

VENDOR BR. R-IV

NMSS / FCMS SS-396

LOEB / MPA MNB 5715

AEOD MNB 7602

CENTRAL FILES 016

CENTRAL FILES (CHRON)

PDR

LPDR

TERA

IE FILES

AD/SG

AD/ROI

REGIONS I,II,III,IV,V

VENDOR BR. R-IV

NRR/DOL

NMSS / SG SS-881

LOEB / MPA MNB 5715

AEOD MNB 7602

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 ☐NMSS ☐OTHER ☐RCI
ROI
SG
FFMSI

8007230239

REV: 7/9/80

Babcock & Wilcox

Power Generation Group

P.O. Box 1260, Lynchburg, Va. 24505

Telephone: (804) 384-5111

July 11, 1980

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

80-252-000

Subject: Cracked Steam Generator Manway Studs at Oconee III

Dear Mr. Stello:

Babcock & Wilcox is hereby informing you of a potential safety concern which may have generic applicability and which we have under investigation. The NRC has previously been made aware of the problem by Duke Power Company in their submittal of a report to their OIE resident inspector and their OIE regional office on June 25, 1980. In view of the NRC's awareness of this problem and the fact that it is not apparent that it has generic applicability, we do not believe 10CFR21 requires further reporting at this time. However, we are submitting the following information to your office.

On June 25, 1980, B&W was informed by Duke Power Company that a stud from the Oconee III A-OTSG lower primary manway was found to be cracked. At that time, B&W was requested to assist Duke Power Company in determining the cause of the cracking. Arrangements were made to ship ten studs to B&W for laboratory examinations. These studs were received on June 28, 1980. They included seven cracked studs from the lower A-OTSG manway, one cracked stud from the upper B-OTSG manway and one additional good stud from the lower manway of both the A and B OTSG's. At this time laboratory examinations are only partially complete. To date, the laboratory examinations have included:

- Visual examination, stereo microscopy, microphotography
- UT on nine studs
- Metallographic examination of the crack surfaces on two studs
- Hardness tests
- Energy dispersive X-ray.

Preliminary investigations have found no unusual material properties and the laboratory UT has confirmed the onsite UT. The two studs that have been examined experienced cracking across approximately 98% and 50% of the cross-sectional area and crack propagation appears to have been at least assisted by corrosion. Further examinations are underway at Babcock & Wilcox laboratories.

Babcock & Wilcox

Mr. Victor Stello

- 2 -

July 11, 1980

The general configuration and material listing of a typical lower OTSG manway is shown on the attached sketch. The upper manway on each steam generator is quite similar. This configuration and material are used on all of the following plants:

Oconee I, II, III
TMI I, II
Crystal River 3
Arkansas Nuclear One, Unit I
Rancho Seco

Davis Besse
North Anna 3,4
WNP 1,4
Bellefonte 1,2
PGE (undesignated site)

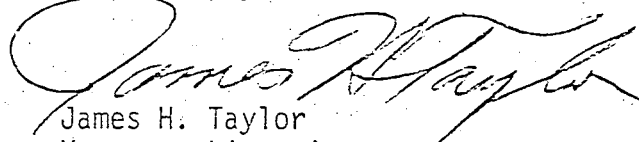
In reviewing past records, it has been determined that two primary manway studs were found cracked at the Arkansas Nuclear One, Unit One Station, in 1978. The two studs which cracked in 1978 were examined visually. One piece of each of these two studs was subjected to laboratory examination. Visual, ultrasonic, and magnetic particle examinations were conducted. In addition, macrophotography, metallography, and microhardness tests were conducted on each sample however the results were not conclusive.

On June 27, 1980, Babcock & Wilcox advised its other operating plant utility customers by telephone about the Oconee III stud problem. On July 10 and 11, 1980, we had further communications by telephone with these same utilities. Copies of this communication are also being sent to them.

In regard to continued operation of the potentially affected plants, we believe that the experience to date with OTSG manways and similar closures with similar materials indicates that there may well be some unique factor which has contributed to the Oconee III stud cracking problem. Therefore, we believe this satisfactory operating experience forms a reasonable basis for continued operation while the investigations and evaluations proceed.

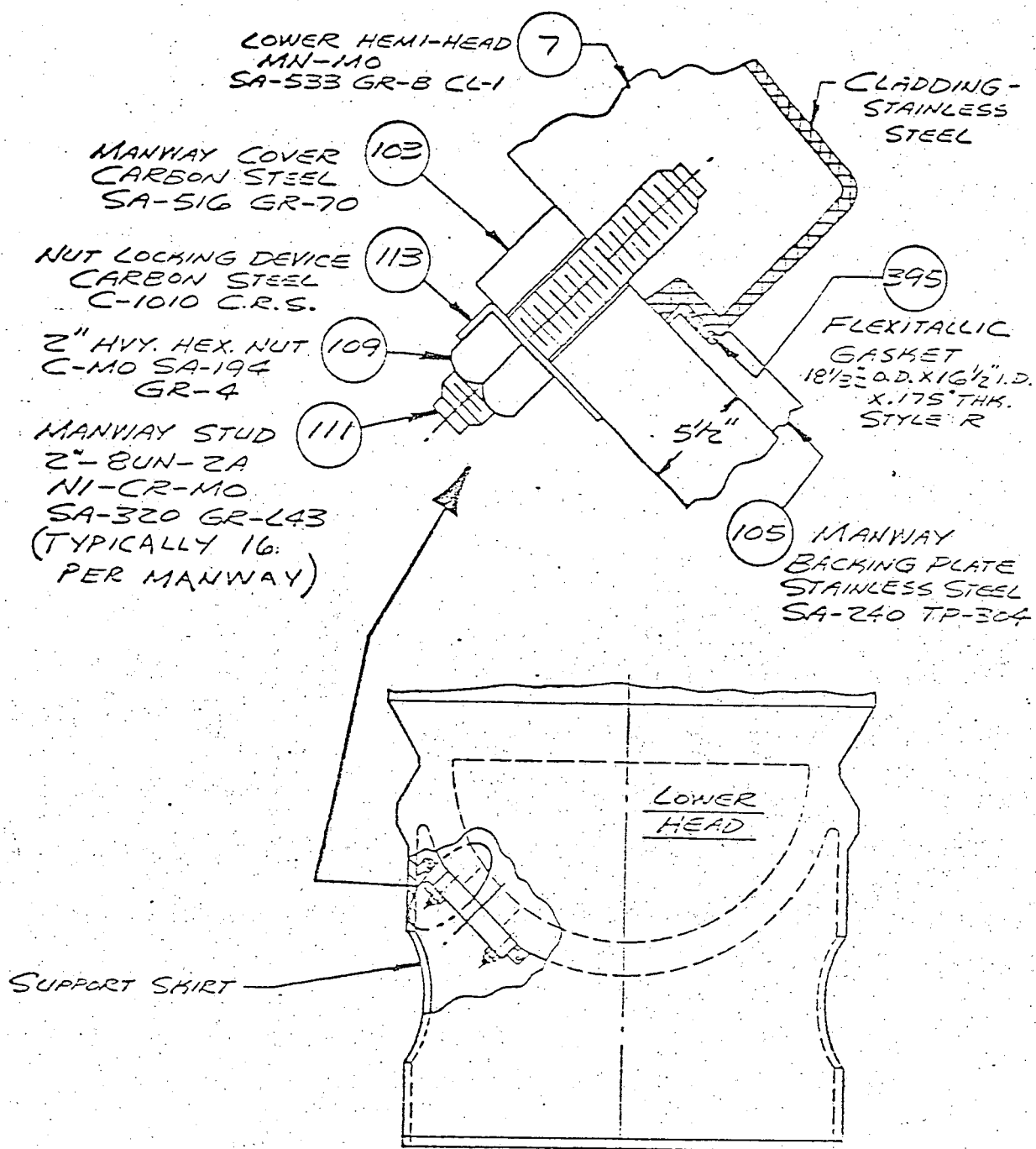
As further substantive information becomes available regarding the generic applicability of this problem, B&W will communicate with your office.

Very truly yours,



James H. Taylor
Manager, Licensing

nwt
Attachment



TYPICAL MANWAY CONFIGURATION

Copies of B&W letter of July 11, 1980 sent to following persons:

G. F. Dilworth
Chief Nuclear Engineer
Tennessee Valley Authority
400 Commerce Avenue W10C126
Knoxville, TN 37902

C. R. Domeck
Nuclear Project Engineer
Toledo Edison Company
300 Madison Avenue
Toledo, OH 43652

S. C. Brown, Jr.
Senior Vice President
Virginia Electric & Power Co.
P.O. Box 26666
Richmond, VA 23261

K. S. Canady
Duke Power Company
P.O. Box 33189
Charlotte, NC 28242

J. P. Thomas, DPM
Washington Public Power Supply System
P.O. Box 460
Richland, Washington 99352

D. C. Trimble
Manager, Licensing
Arkansas Power & Light Company
P.O. Box 551
Little Rock, AR 72203

R. L. Sullivan
Portland General Electric Co.
121 S.W. Salmon Street
Portland, Oregon 97204

D. G. Raasch
Manager, Generation Engineering
Sacramento Municipal Utilities District
6201 S. Street
Sacramento, CA 95813

J. W. Cook, Vice-President
Midland Project
Consumers Power Company
1945 Parnall Road
Jackson, MI 48640

L. Harding
Licensing Supervisor TMI-1
Metropolitan Edison Company
P.O. Box 480
Middletown, PA 17057

P. Y. Baynard, Manager
Nuclear Support Services
Florida Power Corporation
P.O. Box 14042
3201 34th Street, South
St. Petersburg, FL 33732