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VIRGINIA ELECTRIC AND POWER COMPANY, RICHMOND, VIRGINIA 23261

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December 7, 1979

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Serial No. 943A/110879
PSE&C/RHWIII:mac:wang

Docket Nos. 50-280
50-281

License Nos. DPR-32
DPR-37

Dear Mr. O'Reilly:

RESPONSE TO I.E. BULLETIN NO. 79-02, REVISION NO. 2
SURRY POWER STATION UNITS 1&2

The response to your letter of November 8, 1979, concerning I.E. Bulletin No. 79-02, Revision No. 2 "Pipe Support Base Plate Designs Using Concrete Expansion Anchor Bolts" is provided herein. Items 5, 6, and 7 of Revision No. 2 are addressed below as required by the Bulletin.

Item 5 of the revised Bulletin requires a determination of the extent that expansion anchor bolts were used in concrete block (masonry) walls to attach piping supports in Seismic Category I systems (or safety related systems as defined by Revision 1 of I.E. Bulletin No. 79-02). In-plant inspections were performed to determine if any of the pipe supports on the available "Show Cause" and I.E. Bulletin No. 79-14 MKS isometrics were attached to concrete block walls using expansion anchor bolts. Five pipe supports on Seismic Category I systems in the Auxiliary Building were identified as having such installations. The additional information required by item 5a is provided in Attached 1 to this letter. Additional inspections are continuing in Unit 2 and the accessible areas of Unit 1 for Seismic Category I piping which did not have available MKS drawings (primarily piping under 2 1/2 inch diameter). Inaccessible areas of Unit 1 remain to be inspected during an outage. In response to item 5b, there may not have been any special consideration given to designs for Seismic Category I piping supports which were installed on concrete block walls. A case by case review of identified supports is being implemented to determine if support locations are justified or if any modifications are necessary. The evaluation of these supports will be provided in accordance with item 5c when they become available. In response to item 5d, no testing of anchor bolts in concrete block walls has been performed. Further actions with regard to item 5 are as described above.

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Item 6 of the revised Bulletin requires the determination of the extent that pipe supports with expansion anchor bolts used structural steel shapes instead of base plates. The as-built pipe support sketches associated with the NRC Order to Show Cause of March 13, 1979, I.E. Bulletin No. 79-14 and I.E. Bulletin No. 79-02 show that numerous pipe supports were used in which structural steel shapes are attached to concrete surfaces using expansion anchor bolts. The analysis and anchor bolt inspection efforts associated with I.E. Bulletin 79-02 include all attachments of Seismic Category I pipe supports to concrete surfaces using expansion anchor bolts irregardless of whether the support member is a base plate of structural steel shape. These supports using structural steel shapes have been included in the actions performed for this Bulletin and in the work which is still in progress or scheduled to be completed as part of the ongoing effort associated with achieving full compliance with I.E. Bulletin 79-02.

Item 7 of the revised Bulletin requires the provision of a schedule that details the completion dates for I.E. Bulletin No. 79-02, Revision 2, items 1, 2, and 4 which address base plate flexibility, factors of safety, and anchor bolt testing, respectively. Completion of these items is dependent upon the ongoing piping and support analyses associated with the NRC Order to Show Cause of March 13, 1979 and I.E. Bulletin No. 79-14. The base plate "footprint" loads which are generated by these analyses are required to perform the base plate flexibility analyses and calculations of anchor bolt loads necessary to determine anchor bolt test loads which would ensure the factors of safety required by the Bulletin. Based on the anticipated availability of these base plate "footprint" loads the scheduled completion dates for I.E. Bulletin No. 79-02, Revision 2 are as noted below.

For Surry Unit 1 our current schedule indicates base plate flexibility analysis starting on December 3, 1979 for the piping associated with I.E. Bulletin No. 79-14 and on May 19, 1980 for the piping associated with the NRC Order to Show Cause of March 13, 1979. The verification of factors of safety and anchor bolt inspection and testing would begin when anchor bolt loads are available for an entire piping system. The inspection and testing would begin outside the containment and would shift inside the containment during an outage. These efforts will continue through 1980.

For Surry Unit 2, our current schedule shows that the activities associated with these items are scheduled to be completed about April 1, 1980. Current progress indicates that approximately ten per cent of the base plate analyses and thirty-five per cent of the anchor bolt testing has been completed.

We are continuing with our efforts associated with I.E. Bulletin No. 79-02, Revision 2 and will submit a final report upon completion of the actions required by the Bulletin. If you should have any questions, please contact us.

Very truly yours,



W. C. Spencer
Vice President - Power Station
Engineering and Construction Services

cc: Mr. Victor Stello, Director
Office of Inspection & Enforcement

Mr. Harold E. Denton, Director
Office of Nuclear Reactor Regulation

Attachment 1
To Serial No. 943A/110879
I.E. Bulletin No. 79-02, Revision 2
Surry Power Station Units 1 & 2

Seismic Category I Piping Supports
With Expansion Anchor Bolts In
Concrete Block Walls
(Show Cause & I.E. Bulletin No. 79-14 Piping)

<u>Unit</u>	<u>System</u>	<u>Line No.</u>	<u>MKS</u>	<u>Hanger No.</u>	<u>Bolt Type*</u>	<u>Accessible</u>
2	Chemical Volume & Control	4"-CH-494-152	1029A5-1	2	RH	Yes
2	Chemical Volume & Control	4"-CH-494-152	1029A5-1	3	RH	Yes
1	Gaseous Waste	2"-GW-21-154	1107B8-1	18	RH	Yes
1	Gaseous Waste	6"-GW-18-154	1107B2-1	7	RH	Yes
1	Gaseous Waste	2"-GW-88-154	1107B1-1	16	RH	Yes

*RH - These anchors appear to be Phillips Red Head Self Drilling Anchor Bolts.