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New York Power Authority

John C. Brons
Executive Vice President
Nuclear Generation

September 30, 1988
JPN-88-052

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Mail Stop P1-137
Washington, D.C. 20555

SUBJECT: James A. FitzPatrick Nuclear Power Plant
Docket No 50-333
Inservice Inspection Program for Welds and Supports
Hydrostatic Testing of HPCI and RCIC Turbine Exhaust Lines

References:

1. NYPA letter, J. C. Brons to the NRC, dated March 9, 1988 (JPN-87-007) requested relief from the requirement to perform certain hydrostatic tests on the HPCI and RCIC steam supply and exhaust piping.

2. NYPA letter, J.C. Brons to NRC, dated September 9, 1987 (JPN-88-048) submitted a revised relief request for the exhaust piping only.

Dear Sir:

In Reference 1 the Authority requested relief from hydrostatic test requirements for High Pressure Coolant Injection and Reactor Core Isolation Cooling steam supply and exhaust piping. Following telephone conversations with the NRC staff, the Authority submitted a revised relief request in Reference 2. This request applied to the exhaust piping only.

In a telephone conference on September 14, 1988, the NRC staff requested more information concerning the difficulty of performing the tests. Attachment 1 describes in detail existing interferences and the difficulty of installing temporary closures. This information makes evident the difficulty of performing the modifications necessary to perform the tests.

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Should you or your staff have any questions regarding this request, please contact Mr. J. A. Gray, Jr. of my staff.

Very truly yours,

John C. Brons
Executive Vice President
Nuclear Generation

Enclosures

cc: U. S. Nuclear Regulatory Commission
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JPN-88-052

ATTACHMENT 1

INSERVICE INSPECTION PROGRAM FOR WELDS AND SUPPORTS HYDROSTATIC TESTING OF HPCI AND RCIC TURBINE EXHAUST LINES

New York Power Authority
James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
DPR-59

The FitzPatrick HPCI and RCIC turbine exhaust lines were not designed for hydrostatic testing as evidenced by the design pressure of the turbine seals (30 psig), the interferences which exist with other systems, and the difficulty of installing temporary closures (pancakes/blind flanges, etc.). These interferences are itemized below. The estimated times and doses shown below refer only to the specific items described. Total estimated time required is 1,651 person hours. The total dose estimate is 11.994 person rem. These totals include items not listed here, such as removal of insulation and performance of the test itself.

HPCI

- Line 23-2"-WCP-152-12 from the lube oil cooler and gland seal condenser returning to HPCI booster pump suction runs directly over the HPCI turbine exhaust flange and would have to be removed for access. This line is 2" schedule 80 carbon steel pipe with socket weld connections. Cutting and rewelding would be needed. Approximately 24 person hours and 0.288 person rem would be required.

- Stem seal leak-off lines from the turbine control valve to the gland seal condenser also run directly over the exhaust flange and would need to be removed for access to the exhaust flange. Approximately 24 person hours and 0.288 person rem would be required.

- Fire protection lines run near the exhaust flange which might need to be removed for access. Approximately 24 person hours and 0.288 person rem would be required.

- A unit cooler drain line (2" Sch 80) runs near the vertical run of the HPCI turbine exhaust line and would require removal by cutting rewelding. Approximately 24 person hours and 0.288 person rem would be required.

- The following electrical conduits would need to be moved for access or to allow exhaust line movement for blank installation. Approximately 24 person hours and 0.288 person rem would be required.

1CC591BH1	to	23LS-98
1CC591B5	to	23AOV-53
1CC591BR	to	23LS-100

- Four temporary pipe supports and support modifications are required to carry the weight of the exhaust line filled with water. It will be difficult to rig the removal of the pipe spool piece above rupture disc 23%-7 to allow installation of a blind flange. Approximately 120 person hours and 1.44 person rem would be required.

- The disconnection of exhaust flange, movement of exhaust line, installation of blank insert and closure of exhaust flange are required to provide a test boundary at the exhaust flange. Restoration of normal connection after the hydrotest would also be necessary. Approximately 32 person hours and 0.384 person rem would be required.

RCIC

- The RCIC turbine governor control box is directly over the turbine exhaust flange and would need to be removed for installation of a blank flange. Approximately 120 person hours and 1.44 person rem would be required.

- Pipe Supports PFSK-1914 and PFSK-1968 would require partial disassembly to allow exhaust line movement for blank installation. This would require cutting/grinding welds and rewelding to restore. Approximately 24 person hours and 0.288 person rem would be required.

- Instrument lines and supports from root valves RCIC-800 and RCIC-801 to pressure switches 13PS-72A and 13PS-72B would require relocation (cut and reweld) to allow exhaust line movement. Approximately 12 person hours and 0.144 person rem would be required.

- The disconnection of exhaust flange, movement of exhaust line, installation of blank insert and closure of exhaust flange would be required to provide a test boundary at the exhaust flange. Restoration of normal connection after the hydrotest would also be necessary. Approximately 16 person hours and 0.192 person rem would be required.

Hydrostatic tests of the HPCI and RCIC exhaust lines from the

turbine exhaust flange to the first isolation valve are impractical. The exhaust flanges are not designed for disconnection for routine maintenance. This is shown by the fact that the exhaust nozzle is on the lower turbine casing shell, so that disconnection is not required for access to the rotor. The lack of accessibility discussed previously reinforces this fact. Installation of temporary closures would create additional local stresses likely to result in local yielding at elbows and flanged connections. The possibility that other safety-related components could be damaged or improperly reinstalled would be increased.