



August 22, 1989
JPN-89-059

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Mail Station P1-137
Washington, DC 20555

Subject: James A. FitzPatrick Nuclear Power Plant
Docket 50-333
Revised Schedule for Long-Term Pipe Support Program

- References: 1. NYPA letter, J. P. Bayne to H. R. Denton dated January 20, 1984 (JPN-84-002) regarding potential pipe support nonconformance.
2. NYPA letter, J. P. Bayne to D. B. Vassallo, dated May 2, 1985 (JPN-85-038) regarding long-term pipe support inspection and evaluation program.
3. NYPA letter, R. Converse to J. P. Durr, dated April 21, 1988 (JAFP-88-0373) regarding pipe support inspection and evaluation program.

Dear Sir:

In Reference 1, the Authority committed to prepare and implement a program to assure that pipe supports on safety-related piping comply with applicable installation criteria for the FitzPatrick plant. A report describing this plan was submitted as an attachment to Reference 2. The most recent schedule was provided in Reference 3.

As outlined in the program plan, the PSIP (Pipe Support Inspection Program) is a long-term program. Its objective was to accurately document the condition and acceptability of FitzPatrick's pipe supports. Since no generic safety-related pipe support failures have ever occurred at FitzPatrick, this was an appropriate, economical approach.

As detailed in the attached summary tables, most pipe support deviations identified in the PSIP are not significant and are the result of documentation errors, drawings lacking design details, incomplete support identification, or minor weld quality defects. Very few of the deviations were significant enough to declare the affected system inoperable.

To date, the Program has cost approximately \$8,000,000.00 and before the program is finished, the Authority expects to invest an additional 4 million dollars. The Program has consumed 150,000 man-hours and resulted in a total radiation exposure of 145 man-Rem.

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A staff of 2 Engineers, 3 Quality Control Inspectors, 1 Radiation Protection Technician, 3 Stress Analysts, and 12 construction craft personnel are full-time members of the PSIP team. Additional contract personnel are added during outages.

The program consists of three phases; inspection, evaluation and resolution. During the inspection phase, the as-found condition of pipe supports on safety-related piping is compared to plant drawings. Discrepancies identified are then evaluated to determine their effect on support operability and the feasibility of restoring the support to match its design drawing. The resolution phase can include support restoration, detailed stress analysis or a combination of both. In the past, restoration has been the preferred method of resolving discrepancies. Discrepant pipe supports have been routinely restored except where impractical due to access problems or high radiation levels.

Revised Implementation Schedule

When the PSIP plan was originally prepared, the Authority estimated that 1750 supports would have to be inspected and require three years to complete. Since then, the number of supports has grown to over 2800. To assure a thorough, complete Program, the Authority included approximately 600 supports (20% of the total supports in the Program) not within the scope of NRC Bulletins 79-02, 79-07 or 79-14.

The remaining pipe support inspections will be completed and support operability issues resolved by the end of the 1990 refueling outage. However, support restoration, drawing updates and analysis of discrepancies not impacting support operability have been rescheduled for completion by December 31, 1991. The program was previously scheduled for completion at the end of the 1990 refueling outage. This revised schedule is based upon inspecting approximately 26 supports per week during non-outage times and 36 supports per week during outages.

Even with this extension, this remains an aggressive long-term program. Considering the quantity and insignificance of the PSIP's findings to date, this relatively minor schedule change is more than justified.

Greater ALARA Consideration

In addition, the program has been revised to give more consideration to radiation exposure control and ALARA. ALARA goals mandate that the Authority reduce the fraction of supports that are restored. Supports that meet applicable ANSI Code requirements are no longer routinely restored. Instead of restoration, design drawings are being revised to reflect as-found conditions. Engineers are placing greater emphasis on evaluating existing pipe support conditions to reduce the number of supports restored so that radiation exposure is reduced and ALARA goals can be met.

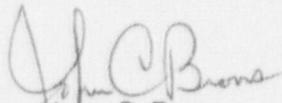
Program Status

Attachment 1 summarizes the current status of the PSIP. As detailed in the attachment, over 60% (1800) of the 2851 pipe supports in the program have been inspected. Many of the discrepancies identified to date result from missing or incorrect documentation. Other discrepancies are the result of design drawings that prescribe construction details that exceed code requirements.

To date, no pipe support within the scope of NRC Bulletins has been sufficiently degraded to threaten system operability. However, two systems were temporarily declared inoperable as a result of problems with small bore pipe supports which are within the programs expanded scope.

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

Very truly yours,



John C. Brons
Executive Vice President
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Attachment 1

James A. FitzPatrick Nuclear Power Plant Pipe Support Program Status as of June 30, 1989

NRC Bulletins 79-02, 79-07 and 79-14 were generally limited to safety-related piping two-and-one-half inches or greater, and Category I piping dynamically analyzed by computer. In addition to piping within the scope of these three bulletins, the FitzPatrick Pipe Support Inspection Program (PSIP) includes pipe supports on piping 2 inches or less (nominal size) and attached to piping that forms part of the reactor coolant pressure boundary or piping that is part of a high energy line within secondary containment. Approximately 20% of the supports in the FitzPatrick PSIP lie outside the scope of the NRC Bulletins.

The three tables below summarize the status of the PSIP as of June 30, 1989. The leftmost column labeled "IEB Scope," represent pipe supports within the scope of NRC IE Bulletins 79-02, 79-07 or 79-14. The column labeled "NYPA Scope" are supports in the FitzPatrick PSIP but not within scope of the three Bulletins. The total number of supports within any one category is the sum of the two columns. (For example: the total number of supports in the PSIP is: 2246 + 605 = 2851.)

TABLE I. GENERAL SUMMARY

<u>IEB Scope</u>	<u>NYPA Scope</u>	
2246	605	Pipe supports in the FitzPatrick PSIP.
1640	160	Pipe supports inspected per the PSIP procedures.
160	40	Pipe supports acceptable as-found.
1480	120	Pipe supports unacceptable as-found due to physical or documentation deviations.

Attachment 1 (Continued)

James A. FitzPatrick Nuclear Power Plant
Pipe Support Program Status as of June 30, 1989

TABLE II. DEVIATION SUMMARY

<u>IEB Scope</u>	<u>NYPA Scope</u>	
1093	72	Pipe supports with minor deviations. Minor deviations are defined as: documentation errors, drawings without design details (like welding requirements, material types, sizes or dimensions) minor weld quality defects and support identification requirements.
387	48	Pipe supports with significant deviations. Pipe supports in this category can be further broken down into 4 subcategories:
	<u>IEB Scope</u>	<u>NYPA Scope</u>
	265	26
		Pipe supports with partially missing, undersized or poor quality welds that could result in support overstress or failure.
	15	5
		Pipe supports with members displaying signs of damage including bent rods, distorted load pins, or bent structural steel.
	65	6
		Pipe supports with loose fasteners or locking devices attributed to either vibration or construction defects.
	42	11
		Pipe supports with missing components or members attributable to operational effects or construction deficiencies.

Attachment 1 (Continued)

James A. FitzPatrick Nuclear Power Plant
Pipe Support Program Status as of June 30, 1989

TABLE III. OPERABILITY SUMMARY

<u>IEB Scope</u>	<u>NYPA Scope</u>	
0	2	Systems determined to be inoperable after analysis of an inoperable support.
14	9	Pipe supports inspected and determined inoperable after analysis.
168	31	Pipe supports operable per PSiP procedures but do not meet original design codes.
1298	80	Pipe supports with some deviation but operable and meet original design codes.
<u>1480</u>	<u>120</u>	Total Deviant Supports