

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-333/87-25

Docket No. 50-333

License No. DPR-59

Licensee: Power Authority of the State of New York
P.O. Box 41
Lycoming, New York 13093

Facility Name: J. A. FitzPatrick Nuclear Power Plant

Inspection At: Lycoming, N.Y.

Inspection Conducted: November 17-19, 1987

Inspector: S. K. Chaudhary
S. K. Chaudhary, Senior Reactor Engineer

3/2/88
date

Approved by: Jack Strosnider
J. R. Strosnider, Chief, MPS, EB, DRS

3/2/88
date

Inspection Summary: Routine unannounced inspection on November 17-19, 1987
(IR 50-333/87-25)

Areas Inspected: Follow-up of status of open items, and work in response to
IE Bulletin 79-14.

Results: No violations or deviations were identified. However, it was
determined that pipe support inspections and evaluations in response to NRC
bulletin 79-14 are not complete.

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Details

1.0 Persons Contacted

New York Power Authority

- *R. Converse, Resident Manager
- *W. Fernandez, Superintendent of Power
- D. Howe, Plant Engineer
- R. Liseno, Planning Superintendent
- T. Moskalyk, Technical Services Plant Engineer
- R. Patch, QA Superintendent
- V. Walz, Technical Services Superintendent

U.S. Nuclear Regulatory Commission

- *A. Luptak, Senior Resident Inspector

In addition to the above, the inspector also contacted other engineering, technical, and administrative personnel during the inspection.

*Persons attending exit interview.

2.0 Inspection Scope

This inspection covered the activities associated with the inspection and evaluation program for pipe supports. This program was developed in response to the IEB 79-14.

2.1 Follow-up on Previously Identified Items

(Closed) 83-18-05, Unresolved Item: This item pertains to potential non-conformance in the re-analysis of pipe support design. These potential inadequacies were identified by the licensee's consultant in this area, Target Technology Limited. (TTL).

The consultant indicated that in the design of pipe support modifications, the stresses resulting from normal loads were not verified to be within the code allowable. The design of the supports for seismic loads was completed in accordance with the applicable code and therefore not in question. Target Technology Ltd. also identified 20 additional supports engineered by Stone and Webster Engineering Corporation (SWEC) which had the potential for not meeting the code allowable limit for the normal loading condition. For the 348 pipe supports identified by TTL as having incomplete calculation packages, the licensee's Design and Analysis Group reanalyzed 342 of these supports (6 were recently modified and reanalyzed). Based on this

reanalysis, all 342 pipe supports were found to be satisfactory under normal operating loads and did not need any structural modifications to meet the FSAR or Code requirements. For the 20 supports engineered by SWEC, a review by SWEC indicated that all necessary verification calculations were made and that the supports were in compliance with the committed criteria.

To evaluate the extent of non-conformance, the licensee visually examined 18 of the 20 supports identified by TTL; and re-analyzed 342 of 348 supports designed by TTL to assure the adequacy of supports to withstand design loads. The licensee also retained another consultant, United Engineers and Constructors (UE), as a third party reviewer of this effort. The third party reviewer was to provide an independent inspection, analysis, and evaluation of the identified pipe supports for their adequacy of design. The inspector reviewed UEs final report (UJ-0078), dated November 11, 1983, and transmitted to the licensee on August 30, 1985. This third party review did not result in the identification of any safety concern in areas originally identified by TTL. This item is closed.

(Closed) 83-21-02, Unresolved Item: This item also is related to the potential inadequacy of pipe supports identified by TTL. Inspection report 83-21 identified that the licensee's 10 CFR 21 evaluations were not complete and were held open for the results of the third party review; also, the adequacy of the licensee's original part-21 evaluation was suspect. However, subsequent NRC review as documented in NRC memoranda, Starostecki to Eisenhut, dated December 5, 1983, and December 19, 1983, determined that the licensee's evaluations were adequate. The above conclusion also was supported by the third party (UE) review. This item is closed.

(Closed) 83-21-03, Unresolved Item: This item pertains to the adequacy of licensee action in response to a TTL letter dated September 3, 1980, questioning the validity of pipe support design by Stone and Webster Engineering Corporation (SWEC). TTL indicated in their December 20, 1982 letter that the fact that calculations had not been done to demonstrate ability to meet normal loading stresses for the subject supports, had been previously brought to PASNY'S attention in a letter dated September 3, 1980 (a copy of this letter was attached). A search of licensee records did not indicate that this letter had been received or evaluated. A subsequent search of individual files located the original of the September 3, 1980 letter, indicating that it had in fact been received. The inspector interviewed the engineer who had received the letter and reviewed a memo written by this engineer dated October 24, 1980, indicating that an answer was required from Stone and Webster to determine if their design covered the work in

question. The licensee has been unable to confirm if Stone and Webster was contacted to evaluate and respond to the September 3, 1980 letter. The adequacy of the licensee's evaluation concerning the information in this September 3, 1980 letter was unresolved pending response from Stone and Webster.

The inspector reviewed SWEC response (PAS-26077) and determined that the design for the pipe supports was adequate. This item is closed.

(Open) 84-04-05, Unresolved Item: This item pertains to inaccuracies in "as-built" drawings used for verifying installed piping and supports in response to IE Bulletin 79-14.

During the review of the licensee's actions with respect to IEB 79-14, the NRC staff identified that the licensee did not have a formal written procedure documenting inspection elements used in verifying the "as-built" condition of piping and supports. This inadequacy of procedure had previously been identified by the licensee's consultant, United Engineers and Constructors (UE).

In November 1983, during a detailed field verification of support member sizes, weld sizes and length, and bolts, UE&C identified dimensional discrepancies in thirteen (13) out of eighteen (18) supports examined. These discrepancies included undersized welds, missing welds, and difference in steel member sizes. The licensee forwarded these discrepancies to Stone and Webster Engineering Corporation (SWEC) for evaluation. SWEC determined that the as-installed piping system was acceptable for all normal and seismic loading despite these deficiencies, and no safety concern existed.

As a result of the above findings the licensee developed a program to inspect all safety-related pipe supports. The program description for the above was submitted to the NRC in May 1985. The program consisted of two phases. Phase I consisted of inspection and evaluation of one hundred (100) supports, the results of which would be the basis of the second phase effort for the remaining supports. The proposed program covered a period of three years. In October of 1985, the licensee informed the NRC that phase I had been completed and phase II of the program had been started. The rate of progress was approximately 10 supports per week for the balance of 1650 supports included in the phase II program.

The licensee, however, had completed only 35% of the scheduled phase II inspection and evaluation of pipe supports by September 1987. In view of the conclusion reached by the plant staff (Memo Gray to Converse, September 9, 1987) that many supports with problems which meet the relaxed operability criteria for the short term, might not have met the original design code requirements, it is a concern of the NRC that pipe support evaluations have been further delayed.

The inspector reviewed the following documents to determine the status of the above program:

Letters, memoranda, & Office Correspondence:

- NYPA to NRC, JPN-83-65, dated 7/7/83
- A.C. Pal to L. Gusquil, dated 8/16/83
- NYPA to NRC, JPN-83-79, dated 9/1/83
- United Engineers to NYPA, UJ-0049, dated 11/11/83
- NYPA to NRC, JPN-83-100, dated 12/19/83
- NYPA to NRC, JPN-84-02, dated 1/20/84
- NYPA to NRC, JPN-85-38, dated 5/2/85
- NRC to NYPA, (Vassallo to Brons), dated 7/22/85
- L. Guaquil to J. Gray, JAF-85-253, dated 9/3/85
- NYPA to NRC, JPN-85-68, dated 10/1/85
- R. Converse to J. Gray, JAFP-87-0716, dated 9/9/87

Pipe Support Task Force, Project Plan, Rev. 1.

Pipe Support Evaluation-Phase 2, Work Tracking Log.

Based on the above review, discussion, and personal observation, the inspector determined that this item has not been resolved. This item therefore remains open.

3.0 Exit Interview

The inspector met with the licensee at the conclusion of the inspection on 11/19/87, at which time the inspector summarized the scope and the findings of this inspection.

At no time during this inspection did the inspector provide any written material to the licensee. The licensee did not indicate that proprietary information was included in the scope of this inspection.