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U. S. ATOMIC ENERGY COMMISSION
REGION III
DIVISION OF COMPLIANCE

Report of Inspection

CO Report No. 263/70-11

Licensed:

Northern States Power Co.
Monticello Nuclear Generating
Plant
Construction Permit No. CPPR-31
~~XXXXXXXXXX~~

[2]

Date of Inspection:

June 10, 1970

Dates of Previous Inspection:

May 25-28, 1970

Inspected By: C. Feierabend

Responsible Reactor
Inspector

July 13, 1970

Accompanied By: H. D. Thornburg

Sr. Reactor Inspector

Reviewed By: H. D. Thornburg

Sr. Reactor Inspector

July 14, 1970

Proprietary Information:

None

SUMMARY

A management meeting was conducted with Northern States Power Company, General Electric Company, and Bechtel Corporation management personnel at the corporate offices of Northern States Power to discuss the status of the audit efforts concerning the balance of plant piping. The scope of the audit appears to provide an adequate sampling of systems and components. Site audit efforts are essentially complete, however, evaluation of these audit efforts and audit of the several vendor facilities are still in progress. Results of these audits are expected to be similar to those for the Table A audit of the primary pressure boundary.

DETAILS

I. Scope of Meeting

A management meeting was conducted with Northern States Power Company, General Electric Company, and Bechtel Corporation personnel at the corporate offices of Northern States Power Company in Minneapolis, Minnesota, on June 10, 1970. The purpose of the meeting was to determine the status of audit efforts for systems outside the primary pressure boundary.

The following personnel attended the meeting:

Northern States Power Company (NSP)

[1]

General Electric Company (GE)

[1]

Bechtel Corporation (Bechtel)

[1]

*Part time

II. Results of Inspection

A. Audit of Piping and Component Outside the Primary Pressure Boundary

GE described the background for the audit that is being conducted, and outlined the approach which is being used to provide assurance that the quality of piping and components outside the primary pressure boundary (PPB) is satisfactory. The audit was

Initiated by GE because of AEC's position on ~~Monticello~~ and because there were sufficient deviations from specifications identified during the Monticello Table A audit to warrant additional audit efforts. [3]

Several factors influenced the methods selected for performing the audit. These include the magnitude of the task (amount of pipe and equipment outside the PPB far exceeds that inside the PPB) and the limited number of experienced personnel available. GE is conducting the audit as three separate audit actions.

1. Audit of items supplied or contracted by GE is being performed by GE APED personnel.
2. Architect engineer (AE) supplied piping and equipment have been contracted to the AE for audit.
3. Audit of field installation QC records is being performed by GE site QA personnel.

B. Status of Audit

GE discussed the audit schedule in comparison with ~~the~~ and other facilities. Monticello is the fifth plant after ~~the~~ in GE's series of plants. The schedule for completion of ~~the~~ balance-of-plant audit was one year after fuel loading. GE stated that the schedule for plants subsequent to ~~the~~, including Monticello, was six months after fuel loading. Scope of the audit and current status is as follows. [2] [3] [3] [2]

1. Audit of GE Supplied Components

Audit of the GE supplied components is approximately one-third complete. Six of sixteen components selected for audit have been completed. No information concerning the results of these audit actions was yet available at the reactor site. This portion of the audit is being conducted by GE APED personnel on a vendor basis, i.e., when GE audits a vendor, this includes audit of components for all GE facilities (as many as nine) at one time. This apparently is the most practical and economical way for GE to perform the audit, however, it appears slow for each individual facility.

2. Audit of AE (Bechtel) Supplied Components

A representative of the AE described the scope of the audit and the audit efforts that have been performed to date. The scope of the audit included samples of all emergency safeguards systems in addition to the high temperature and pressure lines outside the PPB. This includes portions of the main steam line (including all branch lines), the HPCI, RHR, Core Spray, RCIC, Reactor Water Cleanup, Feedwater, Standby Liquid Control, and Control Rod Drive systems.

The AE used the same format for the balance-of-plant audit as for the Table A audit. The AE representative described deviations identified to date to be of the same general type as those identified during the Table A audit. The opinion expressed was that the traceability of material to specific heats would be the most prevalent deviation. This was because much of the lower pressure pipe had early delivery dates, and so could have been delivered before any requirement for individual traceability had been established.

3. Audit of Field Installation

Audit of the field installation was performed by GE APED, utilizing members of their project staff assigned to the construction site. This audit was independent of the normal site QA functions. According to Mr. [REDACTED], this portion of the audit was 85-90% complete, with no significant deficiencies identified. [C.C.]

The audit was designed to provide 90% confidence level that no deficiencies exist in the systems sampled. The inspector reviewed the method of selecting samples and the resultant selection of the field welds for audit. Twenty-five isometric drawings were selected randomly. All of the field welds were identified and tabulated by size of pipe. The drawings included 90 socket welds (2" pipe in the control rod drive system) and 515 other welds. Audit of a sample of 25 of the socket welds (2" pipe) showed no deviations. The 515 other welds included nominal pipe sizes 2½" through 20", including all intermediate sizes. Audit of 15 of the other welds identified three minor deviations in recording. There were no deviations in the quality of welds or radiography.

- a. For one weld, the GE [REDACTED] had not signed as having reviewed the radiographs. (The radiographs were good and had been signed by the Bechtel inspector.) This was not a code or specification deficiency, but was a deviation from QA procedure. [C.]
- b. One weld had two sets of film with no explanation. Both sets showed the weld to be acceptable. (This was not considered to be a deficiency by the CO inspector.)

- c. One weld QA identification was different from the identification obtained from the isometric drawing. This was the first weld on a branch line, and was positively identified as to being the records for the weld in question. The weld had apparently been identified as a part of the main line radiography. The records were corrected to properly identify the weld to agree with the isometric identification. CE considered this to be a deficiency because it would have been difficult to positively identify the radiographs with the weld at a later date, after personnel familiar with the radiography procedures have departed the reactor site.

In accordance with the sampling procedure, another sample of 25 welds was selected. Audit of this sample did not reveal any deficiencies.

The results of the sample audit of the field welds of the balance of plant piping supplements our previous information concerning site QA performance, indicating that the site QA program is functioning effectively.