UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

TELEPHONE
(312) 858-2660

A. RO Inspection Report No. 050-263/74-10

Transmittal Date : January 20, 1975

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RO:HQ (5)
DR Central Files
Regulatory Standards (3)
Licensing (13)
RO Files

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B. RO Inquiry Report No. _____

Transmittal Date : _____

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C. Incident Notification From: _____
(Licensee & Docket No. (or License No.)

Transmittal Date : _____

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JAN 20 1975

Northern States Power Company
ATTN: Mr. Leo Wachter, Vice President
Power Production and System
Operation
414 Nicollet Mall
Minneapolis, Minnesota 55401

Docket No. 50-263

Gentlemen:

This refers to the inspection conducted by Messrs. Choules, Brown and Jordan of this office on December 3-6, 1974, of activities at the Monticello plant authorized by AEC Operating License No. DRP-22, and to the discussion of our findings with Messrs. Larson, and others of your staff at the conclusion of the inspection.

A copy of our report of this inspection is enclosed and identifies the areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, interviews with plant personnel, and observations by the inspectors.

During this inspeciton, it was found that certain of your activities appear to be in violation of AEC requirements. The items and reference to the pertinent requirements are listed as Items A and B under Enforcement Action in the Summary of Findings Section of the enclosed inspection report.

This notice is sent to you pursuant to the provisions of Section 2.201 of the AEC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office within twenty days of your receipt of this notice, a written statement or explanation in reply, including: (1) corrective steps which have been taken by you, and the results achieved; (2) corrective steps which will be taken to avoid further violations; and (3) the date when full compliance will be achieved. Such a statement or explanation should be provided for each of the items listed.

One item of noncompliance which had been identified prior to the inspection by facility personnel was reviewed. The item and reference to pertinent requirements is listed as Item C under Enforcement Action in the Summary of Findings Section of the enclosed inspection report. Prior to the conclusion of the inspection, the inspectors determined that corrective action had been taken with respect to this violation and that measures have been taken to assure that a similar, future violation will be avoided. Consequently, no reply to this letter is required with respect to Item C, and we have no further questions regarding this matter at this time.

In accordance with Section 2.790 of the AEC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the AEC's Public Document Room. If this report contains any information that you or your contractors believe to be proprietary, it is necessary that you make a written application to this office, within twenty days of your receipt of this letter, to withhold such information from public disclosure. Any such application must include a full statement of the reasons for which it is claimed that the information is proprietary, and should be prepared so the proprietary information identified in the application is contained in a separate part of the document. Unless we receive an application to withhold information or are otherwise contacted within the specified time period, the written material identified in this paragraph will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely yours,

Gaston Fiorelli, Chief
Reactor Operations Branch

Enclosure:
RO Inspection Report
No. 050263/74-10

bcc: RO Chief, FS&EB
RO:HQ (4)
Licensing (4)
DR Central Files

RO Files
PDR
Local PDR
NSIC
TIC
OGC, Beth, P506A
A. Roisman

U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS

REGION III

Report of Operations Inspection

RO Inspection Report No. 050-263/74-10

Licensee: Northern States Power
414 Nicollet Mall
Minneapolis, Minnesota 55401

Monticello Nuclear Generating Plant
Monticello, Minnesota

License No. DPR-22
Category: C

Type of Licensee: BWR (GE) 545 MWe

Type of Inspection: Routine, Unannounced

Dates of Inspection: December 3-6, 1974

Date of Previous Inspection: November 10, 1974 (Operations)

Principal Inspector: D. Zurelli for N. C. Choules — 1/17/75 (Date)

Accompanying Inspectors: for E. L. Jordan C. H. Brown — 1/20/75 (Date)

E. L. Jordan

Other Accompanying Personnel: None

Reviewed By: D. Zurelli for E. L. Jordan
Senior Inspector
Reactor Operations Branch — 1/17/75 (Date)

SUMMARY OF FINDINGS

Enforcement Action

The following violations are considered to be of Category II severity.

A. Criterion V, 10 CFR 50, Appendix B, states in part, that "Activities affecting quality shall be prescribed by documented instructions, procedures . . . and shall be accomplished in accordance with the instructions, procedures . . ." The licensee's procedure ACD7.1 has the following requirements:

1. Paragraph 6.10 states: "If a Design Change is determined to require safety review, the Operations Committee shall review the Design Change Control Form; Preliminary Design Change Package and the Safety Evaluation to assure that they are correct and complete. If they are not, they shall be returned to the responsible person or organization for revision of completion."

2. Paragraph 6.13 states: "The Operations Committee may recommend changes in the design or request additional analysis and information. The Operations Committee shall recommend approval or rejection of the change."

Contrary to the above the licensee completed and declared operational a design change before it was approved by the Operations Committee. The design change was the addition of a bypass valve around CRD-102 valve. (Management Interview, Item G and Section II Report Details, Paragraph 4)

B. Criterion V, 10 CFR 50, Appendix B, states in part, that "Activities affecting quality shall be prescribed by documented instructions, procedures . . . and shall be accomplished in accordance with instructions, procedures . . . ." The licensee's Administrative Control Directive (ACD) 4.8, Bypass Control, Section 6.7.1 requires, "All bypasses installed for other reasons than trouble shooting or procedures shall have an independent verification of the installation and removal." Section 6.7.2 requires, "When a bypass is used in a procedure, the system or component shall be verified to be in the desired condition by an independent person upon completion of the procedure." Section 6.7.5 requires, "Independent verification shall be documented in the Bypass and Jumper Log Book."

Contrary to the above, independent verification was not recorded in the Bypass and Jumper Log when lifting wires to transfer control logic from "C" to "H" Steam Relief Valve per Work Request Authorization 74-1764 and when clearing of a jumper for a special test of "H" relief valve on November 21, 1974. (Management Interview, Item D.3.(a) and Section I, Report Details, Paragraph 4.C.(3)).

C. Technical Specification 3.2.D.2 states that "From and after the date that one of the two steam jet air ejector off-gas radiation monitors is made or found to be inoperable, continued reactor power is permissible provided the inoperable radiation monitor instrument channel is tripped."

Contrary to the above on July 22, 1974, with the plant at 85% power, the licensee failed to put one steam jet air ejector off-gas monitor that was being calibrated in the tripped position. Calibration of the monitor makes it inoperable. (Management Interview, Item A.2 and Section I, Report Details, Paragraph 1.b)

Licensee Action on Previously Identified Enforcement Matters

Not applicable.

Unusual Occurrences

A. The motor breaker for the No. 11 Residual Heat Removal (RHR) service water pump would not close during attempts to start the pump on July 12, 1974. (Section I, Report Details, Paragraph 1.a)

B. During surveillance testing on August 6, 1974, of the High Pressure Coolant Injection (HPCI) Auxiliary Oil Pump, the HPCI turbine stop valve failed to open on the first attempt. (Section I, Report Details, Paragraph 1.C)

C. The outboard steam isolation valve for the Reactor Core Isolation Cooling System (RCIC) failed to close completely when given a close signal on August 26, 1974. (Section I, Report Details, Paragraph 1.d)

D. Two reactor system safety relief valves actuated prematurely on November 11 and 15, 1974. (Section I, Report Details, Paragraph 1.e)

Other Significant Findings

A. Current Findings

1. Mr. W. Shamla, Instrument Engineer, has been reassigned as Plant Engineer, Technical.

2. A planned outage for refueling is scheduled for January 9, 1975.

3. The off-gas recombiner has been placed in operation. (Section I, Report Details, Paragraph 2.C)

B. Unresolved Items

1. The licensee's procedure for preparation of work requests does not contain instructions for making changes to work requests after they have been approved. (Management Interview, Item H and Section II, Report Details, Paragraph 2)

2. The licensee does not have a method of identifying inoperable and out of calibration instruments. (Management Interview, Item B.3)

C. Status of Previously Reported Unresolved Items: None reported.

Management Interview

The following persons were present at the management interview conducted at the conclusion of the inspection on December 6, 1974.

C. E. Larson, Plant Manager
M. H. Clarity, Superintendent, Plant Engineering and Radiation Protection
D. D. Antony, Plant Engineer, Operations
W. A. Shamla, Plant Engineer, Technical
W. A. Sparrow, Operations Supervisor
H. E. Nimo, Maintenance Supervisor
D. Woofe, Quality Assurance Engineer

A. Abnormal Occurrences

1. AO's-263/74-20, 74-22, 74-23, 74-24 - The inspector stated that he had reviewed the licensee's corrective actions regarding these abnormal occurrences and determined they had been accomplished as indicated in the licensee's reports. (Section I, Report Details, Paragraph 1)

2. AO/74-21 - The inspector stated that this occurrence was an apparent violation of the technical specification and that the licensee's corrective action stated in his report[1/] was adequate and no further response was necessary. The inspector stated that this violation was the result of personnel not following a procedure because they did not understand it. The licensee stated they were well aware of this and have instructed their personnel to contact a cognizant person when they do not understand a procedure. (Enforcement Action, Item C and Section I, Report Details, Paragraph 1.b)

B. Outstanding Items

Six outstanding items, including feedwater orifice welds, off-gas system, RO Bulletin 74-9, inspection of HPCI and RCIC turbine controls, standby liquid level indication and vane type flow switches were reviewed with the licensee. (Section I, Report Details, Paragraph 2)

1/ AO Rpt No. 263/74-21, NSP to DOL dtd 8/1/74.

C. Calibration of Equipment

The following items related to the calibration of equipment were discussed.

1. The inspectors stated that their review showed that calibration of three digital voltmeters used as secondary standards was delayed during one quarter by almost a month according to the licensee's schedule. The licensee acknowledged this statement. (Section I, Report Details, Paragraph 3.c)

2. The inspectors stated that their review indicated that deviation limits on instrument output for a given input were not always stated on the calibration cards and that it would be advantageous to the technicians if this allowable deviation were on the cards. The licensee stated they would consider adding the deviations. (Section I, Report Details, Paragraph 3.a)

3. The inspectors stated that instruments are not marked as to when recalibration is required and that the licensee does not have a method of identifying instruments that are inoperative or out of calibration. The licensee stated they would review these items and consider methods of identifying out of calibration and inoperative instruments. (Section I, Report Details, Paragraph 3.c)

4. The inspectors stated that the letter certifying calibration for the DC voltage standard did not have an actual calibration date on it but implied that the date of the letter was the date of the calibration. The inspector stated that the licensee representative agreed to request an actual calibration date. The Licensee confirmed this statement. (Section I, Report Details, Paragraph 3.b)

D. Plant Operations

The inspector stated that he had reviewed general plant operations including a tour of the plant, interviews with operators, log books, temporary operating orders, and significant operating events. Items were discussed as follows:

1. Plant Tours

(a) The inspector stated that gauge PI 3/220 had a bent indicator. The licensee stated they would replace or straighten the indicator.

(b) The inspector stated there was a buildup of dirt on the top of equipment in the rod control drive areas. The licensee stated the area would be cleaned up.

(c) The inspector stated that four annunciator lights related to recirculation pump leakage were lit all the time. The licensee stated that there are problems with pico switches that give the annunciators and that they are considering ways to correct the problem. The licensee stated that they are monitoring the pump seal pressures and temperature to check for excessive leakage.

2. Significant Operating Events (SOE)

(a) The inspector inquired if the licensee intends to replace the inner filter with undersized screens installed in four control rod drives during the January shutdown as suggested in SOE 74-5. The licensee stated they intend to replace the screens. (Section I, Report Details, Paragraph 4.b)

(b) The inspector inquired if the licensee intends to inspect three control rod drive valves for broken wedges during the January shutdown as suggested in SOE 74-6. The licensee stated they intend to inspect the three valves. (Section I, Report Details, Paragraph 4.b)

(c) The inspector stated that the SOE's were well prepared and written.

3. Log Books

(a) The inspectors stated their review of the jumper and bypass log indicated that documentation of actions related to jumpers were not always completed as required by the licensee administrative control directives and this was an apparent violation to Section V of Appendix B, 10 CFR 50. The licensee acknowledged this statement. (Enforcement Action, Item B and Section I, Report Details, Paragraph 4.C)

(b) The inspector stated that the control room logs contained good detail as to why an action was performed.

(c) The inspector stated that the licensee's representative agreed that review of log books by supervision will be indicated by the initialing of the log when the review is completed. The inspector suggested that an instruction on review of logs by supervisory personnel should be prepared. The licensee acknowledged the first statement and stated they would consider preparing an instruction for the review of logs. (Section I, Report Details, Paragraph 4.c)

4. Administrative Procedures

The inspectors stated that there was duplication of instructions in the licensee's recently issued Administrative Control Directives (ACD's) and Volume A of the Operations Manual which could lead to confusion. The licensee stated that Volume A would be revised and all instructions covered by the ACD's deleted by December 31, 1974. (Section I, Report Details, Paragraph 4.e)

5. Organization Changes

The licensee stated that W. Shamla had been assigned to the position of Plant Engineer Technical, filling the position vacated when G. Jacobsen was promoted to another position[2/]. The licensee also stated that 10 out 10 applicants had passed AEC operators exams and they now have 6 new licensed reactor operators and 4 new licensed senior reactor operators. The licensee stated that three previously licensed reactor operators had transferred to a new coal fired unit on December 1, 1974.

E. RHR Heat Exchanger Leak

The existence of a possible small leak from the service water side to the primary side of the subject heat exchanger was discussed. The inspector requested that periodic checks be made to determine if the leak was increasing. The licensee stated that leak checks had been instigated. (Section I, Report Details, Paragraph 5)

F. Maintenance Activities

1. The inspector stated that the review of the work package for repair of valve CRD-102 revealed that liquid penetrant test had not been performed.

   The licensee subsequently notified the inspector that the test would be performed during the week of December 16. (Section II, Report Details, Paragraph 2.c)

2. The inspector stated that there was no procedural guidance for making changes to WRA after the work had commenced. The licensee agreed to review this matter. (Section II, Report Details, Paragraph 2.c)

3. The inspector stated that when electrical motors were meggered, the followup action should be stated on the preventative maintenance (PM) documentation. This was not the case for the PM tests reviewed. The licensee agreed to review this area. (Section II, Report Details, Paragraph 2.i)

2/ RO Inspection Report No. 74-06.

G. Design Changes

1. The inspector informed the licensee that the review of the installation of the bypass valve around CRD-102 revealed that the work was completed before the Operations Committee had reviewed and approved the design changes and requested more information. The licensee provided the additional information by phone on December 10, 1974. The licensee was then informed that the above item was considered to be a violation of 10 CFR 50, Appendix B, Criterion V. (Enforcement Action, Item A and Section II, Report Details, Paragraph 4.b)

2. The inspector summarized the discussion held with the licensee on the format of the safety evaluation. The licensee acknowledged the comment. (Report Details, Section II, Paragraph 4)

H. Work Request and Surveillance Testing Forms

The inspector requested the licensee to review the controlling documents for filling out various forms such as the Work Request Authorization (WRA) and Surveillance Procedures and clarify the requirements. The licensee agreed to conduct a review. (Section II, Report Details, Paragraph 5)

I. Motor Operated Valve Overload Indications

The inspector stated that in a discussion with plant personnel it was noted that there was no indication in the control room of an overload protective device opening on a safety system motor operated valve power supply. The inspector requested the licensee to provide a method to assure power availability on such systems. The licensee agreed to make a review of methods to provide assurance of power. (Section II, Report Details, Paragraph 6)

REPORT DETAILS

Section I

Persons Contacted

Northern States Power Company

C. E. Larson, Plant Manager
M. H. Clarity, Superintendent Plant Engineering and Radiation Protection
W. E. Anderson, Superintendent Operation and Maintenance
W. A. Sparrow, Operations Supervisor
H. E. Nimo, Maintenance Supervisor
P. A. Pochops, Quality Engineer
D. D. Antony, Plant Engineer Operations
W. A. Shamla, Plant Engineer, Technical
L. L. Nolan, Engineer
M. F. Hammer, Engineer
B. D. Day, Engineer
B. L. Jeness, Engineer
J. R. Pasch, Engineer
W. J. Hill, Engineer, Instruments and Controls
F. J. Schober, Shift Supervisor
R. R. Rodger, Lead Plant Equipment and Reactor Operator
M. W. Ommen, Plant Equipment and Reactor Operator
D. O. Rolsum, Lead Plant Equipment and Reactor Operator
W. F. Boehme, Plant Equipment and Reactor Operator

Nuclear Services Corporation

D. Woolf, Quality Assurance Engineer

1. Abnormal Occurrences

   a. AO 263/74-20

      The licensee informed the inspector by telephone on July 12, 1974, that the No. 11 Residual Heat Removal Service Water Pump failed to start due to a malfunction of the motor breaker. The details and the corrective action for the abnormal occurrence are described in the licensee's report.3/

      The inspector reviewed the preventive maintenance procedure and surveillance test for the above system and verified the licensee's actions as stated in the licensee's report.

3/ AO Rpt No. 263/74-20, NSP to DL dtd 7/22/74.

b. AO 263/74-21

The licensee informed the inspector by telephone on July 23, 1974, that a technician failed to put an air ejector off-gas radiation channel that was being calibrated in the trip position which defeated the trip function of the off-gas radiation monitors during the calibration. The details and corrective action for the abnormal occurrence are described in the licensee's report.[4/]

The inspector reviewed the licensee's corrective action as stated in the report and verified it had been completed. Review of the procedure which the technician used to calibrate the channel with, showed that the technician did not perform the first step of procedure which required a switch to be set from NORMAL to TRIP. The technician had previously performed the calibration with a procedure which required the channel to be tripped by disconnecting the signal lead to the channel. The technician, when he saw the new procedure assumed the signal had been disconnected and skipped the first step of the procedure when he did not understand, instead of calling a cognizant engineer regarding the procedures.

c. AO 263/74-22

The licensee informed the inspector by telephone on August 6, 1974, that the HPCI turbine stop valve failed to open on Ausust 6, 1974. The details and corrective action for the abnormal occurrence are described in the licensee's report.[5/]

The inspector reviewed records which indicated that the LPCI, RCIC and core spray were demonstrated to be operable when the HPCI turbine stop valve failed to open. The licensee informed the inspector that there have been no failures of the valve to open since the failure on August 6, 1974.

d. AO 263/74-23

The licensee informed the inspector by telephone on August 26, 1974, that the RCIC outboard isolation valve, MO-2076, failed to close completely during turbine surveillance testing. The details and the corrective action are described in the licensee's report.[6/]

The licensee has added a requirement to the operating procedure for the RCIC to cycle the valve immediately prior to backseating. This action implements the corrective action stated in the AO Report. The licensee informed the inspector that there have been no subsequent failures of this valve to close.

4/ AO Rpt No. 263/74-21, NSP to DL dtd 8/1/74.
5/ AO Rpt No. 263/74-22, NSP to DL dtd 8/26/74.
6/ AO Rpt No. 263/74-23, NSP to DL dtd 9/5/74.

e. AO 263/74-24

The licensee informed the inspector by telephone on November 15, 1974, that the reactor system Safety/Relief valve "E" actuated prematurely with the plant at 81% power. The details and the corrective action are described in the licensee's report. 7/

The inspector reviewed work requests which indicated refurbishing of the relief valves had been completed as stated in the abnormal occurrence report. The licensee is also monitoring safety/relief valve discharge temperature as stated in the report.

2. Outstanding Items

The following items were reviewed.

a. Cracked Feedwater Orifice Weld

The licensee reported that one of four welds for feedwater orifices had cracked and was repaired. 8/ During a previous inspection, 9/ the licensee had not determined what was to be done about the remaining three welds. The licensee informed the inspector during this inspection that the three welds would be ground out and rewelded during the January shutdown.

b. RO Bulletin 74-9, Circuit Breakers

The inspector inquired as to the status of corrective action per the subject bulletin.

The licensee stated that parts had been ordered and if they arrived in time, they would be installed in approximately 50 circuit breakers with potentially defective parts.

c. Off-Gas System

The inspector reviewed with licensee, events related to the off-gas system since the previous inspection in July. 10/

The licensee determined by neutron activation that there was palladium catalyst in the inlet piping. They also found palladium pellets in a A train valve and in both A and B train preheaters. The leakage of pellets is believed to have occurred due to the retention screens and support plates in the recombiner not holding the pellets. These have since been redesigned and replaced.

7/ AO Rpt No. 263/74-24, NSP to DL dtd 11/25/74.
8/ AO Rpt No. 263/74-19, NSP to DL dtd 6/24/74.
9/ RO Inspection Rpt No. 050-263/74-06.
10/ Ibid.

Following the discovery of trace amounts of palladium in the inlet piping, a major cleaning of the piping was carried out. The 24 inch delay line was cut into and cleaned using hydro laser (high pressure spray), wet sand blasting, dry sand blasting and finally a chemical cleaning (dilute phosphoric acid solution) had to be used to clean the delay line and other small lines to remove all the palladium. Following the cleaning, the lines were drained, flushed, the holes rewelded, and the system hydroed.

Testing of the system was then started in November. There have been no hydrogen detonations. The recombiner system has operated satisfactory reducing the off-gas radiation by about a factor of six. The licensee's major problems with the system are leaks through sampling line fittings and high background radiation levels in the recombiner building. This may require some redesigning of the system.

Testing of storage system was just starting at the time of the inspection.

d. Inspection of HPCI and RCIC Turbine Control

The licensee previously committed to inspect the subject controls during the next refueling outage.[11/] The inspector reviewed work requests in which the licensee inspected the controls during April 1974 outage. During the inspection of the RCIC control, the licensee found a partially wiped journal bearing between the pump and the turbine. The bearing was wiped because of low oil level due to the sight glass location. The bearing was replaced and the sight glass relocated. In addition, during surveillance tests as required by an operating memo the licensee squirts oil onto the bearing initially to assure adequate lubrication. The bearing is lubricated as it turns through the oil in the oil sump. The inspector inquired if the bearing would have adequate lubrication to prevent damage to the bearing if the RCIC started on AUTO. The licensee's representative stated that it would have. He further stated that the reason the oil was added initially during surveillance testing is that there is a possibility of the bearing running without lubrication initially and that repeated starts for surveillance testing over a long period of time might damage the bearing without the added lubrication.

Inspection of the HPCI controls indicated no equipment problems with the exception that a new magnetic pickup was installed.

11/ NSP ltr to DL dtd 5/25/73.

e. Standby Liquid Level Indications

The inspector inquired if the buoyancy level transmitter had been installed in the standby liquid control tank as was previously indicated.[12] The licensee stated that the buoyancy level transmitter was installed during August 1974.

f. Vane Type Flow Switches

The inspector inquired as to the status of the vane type flow switches which were discussed previously.[13] The licensee stated that the vane type flow switch installed in the standby liquid control system had been removed as it was previously indicated it would be. The licensee indicated that improved switches for the residual heat removal system and the reactor water cleanup system in place of the original flow paddle switches with the paddles removed were still being reviewed.

3. Calibration of Equipment

a. Component Instrumentation

The inspector reviewed calibration records for the following component instrumentation and determined the instruments were being calibrated using procedures as required by the licensee.

(1) FT-2-110A, Recirculation Loop 11 Flow Transmitter.
(2) DPIS-2116A, Main Steam "R" High Flow Isolation Transmitter.
(3) Source Range Block Calibrations.
(4) PS-5-1-11A, Condenser 1A Low Vacuum Scram Pressure Switch.
(5) PS-23-68A, HPCI Main Steam Line Low Pressure Switch.
(6) PS-13-67, RCIC Low Pump Section Pressure Trip Switch.
(7) Conductivity Recorder for Fuel Pool Filter/Demineralizer.

During the review of calibration cards it was noted on Item (1) that $\pm$ limits on calibration outputs were not specified. A check of other calibration cards showed limits were included on some cards, and not on others. The inspector suggested that including the limits would make the technicians job easier and avoid possible errors.

Review of the calibration card for Item (5) indicated a discontinuity in the setting. The licensee's representative indicated that it was determined that the original head correction of 26 psi should be 7 psi, hence the discontinuity. He further indicated that a setpoint change should have been indicated on the card, but apparently had been inadvertently omitted. The licensee's representative stated that the setpoint change would be indicated on the card.

12/ RO Inspection Rpt No. 050-263/74-06.
13/ RO Inspection Rpt No. 050-263/74-02.

b. Primary Calibration Standards

Calibration records for the following were reviewed.

(1) Manfield and Green Dead Weight Tester.

(2) Hewlett Packard DC Voltage Standard.

(3) Merriam U-Tube Manometer.

The records indicated that the voltage standards was being calibrated on a prescribed frequency, the dead weight tester was calibrated in August 1969 and the manometer was certified in December 1972. Accuracies of these calibrations were traceable to the National Bureau of Standards. Storage of the equipment was adequate but not segregated from other equipment. It was noted that the certificates of calibration letters for the DC Voltage standard from the calibration laboratory contained only the date of the letter and not the actual date of the calibration. The licensee's representative stated he would request that the actual calibration date be indicated.

c. Secondary Standards

The inspector reviewed calibration cards which indicated that three Heise gauges and one Wallace and Tierney gauge were currently calibrated and had been calibrated monthly since May as required by the licensee's Instrument Maintenance Manual.

Review of calibration records for three Fairchild digital voltmeters indicated that quarterly calibrations which were due in late April, 1974 were not accomplished until late May, 1974. Calibrations of the three instruments since May 1974 have been timely. The inspectors discussed the delayed calibration in conjunction with an apparent need for improved identification on the instruments of calibration status or non-conformance.

d. I&C Specialist Qualifications

The inspector reviewed qualifications records of two I&C specialists and verified they were in accordance with ANSI Standard 18.1.

e. Instrument Maintenance Manual

The inspector noted that the subject manual had a space for an approval signature, but was not signed. The licensee's representative stated they were using the manual as if it were approved and they were not sure if it required approval, but he would look into it.

4. Plant Operations

a. Plant Tour

The inspector conducted a tour of the plant accompanied by the licensee's representative. The deficiencies noted during the tour are discussed in Section D of the Management Interview.

The inspector inquired of the control room operators as to why various annunciators were lit and was given adequate answers.

b. Significant Operating Events, (SOE)

The inspectors reviewed SOE Reports 74-01 through 74-07. The events for these reports occurred March 5 through June 11, 1974. Two reports were reviewed and discussed at some length with the licensee as follows:

- SOE 74-05 - Following the replacement of six control drives during the spring outage, the licensee determined that the scram insertion times were excessive. The licensee determined that the inner filters which were installed had undersized screens. Two of the six screens were removed and replaced. The four filters that were not removed were in four different groups of four control rod drives such that the average of the three fastest rods met the Technical Specification requirement of Section 3.C.2.

  The vendor recalled all the filters with undersized screens about the time the filters were installed, but due to a breakdown in communications between the warehouse and maintenance the installation of the six filters was not prevented. All other filters with undersized screens have been returned to the vendor.

  The SOE report recommended that the four remaining filters with undersized screens be replaced at the first opportunity.

  SOE 74-06 - On June 8, 1974, the licensee determined that the valve wedge for withdrawn riser isolation valve CRD-102 for Control Rod Drive (CRD) 46-27 had separated from the stem and was wedged in the closed position. This would not allow the rod to be withdrawn. The licensee installed a temporary bypass and then installed a new valve as permanent corrective action. The SOE report recommended that three of these valves in other CRD's be inspected for cracks.

c. Log Books

The reactor control room log between November 1 and December 3 was reviewed. No deficiencies were noted in the log.

The inspector inquired if the logs are reviewed by supervision and if the review is documented. The licensee's representative stated that the logs are reviewed daily but not documented. The licensee's representative stated that in the future, documentation of the log reviews will be made by the person making the review initialling each page of the log.

The inspector reviewed the licensee's Bypass and Jumper Log and noted the following deficiencies.

(1) Entry 1440 on December 4, 1974, return to normal was not initialed.

(2) The word "cleared" and the time, dated and initials left off in 6 out of last 15 entries. The licensee's ACD 4.8 Section 6.6.10 requires this.

(3) Independent verification was not documented for the following:

(a) Lifted wires to transfer control logic from "C" to "H" steam relief valve as accomplished by Work Request Authorization 74-1764.

(b) The clearing of the jumper for special test of the "H" relief valve on November 21, 1974.

The licensee's ACD 4.8 Section 6.7.5 states that, "Independent verification shall be documented in the Bypass and Jumper Log Book."

In discussion with the licensee's representative it was indicated that a Jumper Bypass Form was being considered instead of entries into a log book. The form would have spaces appropriately marked for each required signature and initial and should eliminate some of the problems indicated above.

d. Temporary Operating Orders

The subject orders were reviewed from January to the present. The only deficiency noted was that in two cases, review of safety related orders by the operations committee was greater than the thirty days required by Section A.6 of the Licensee's Operation Manual.

e. Administrative Procedures

During the review of the Jumper and Bypass Log, the inspectors determined that there were two administrative instructions applicable to these logs. One in the licensee's Adminstrative Control Directives, and one in Volume A of the Operations Manual. Comparison of ACD's and Volume A showed several other instructions in each to be applicable to the same thing. The licensee's representative indicated the ACD's were controlling when they covered a particular area, but in some cases where ACD's were not prepared, Volume A of the Operations Manual was controlling. The licensee's representative indicated that most of Volume A would be deleted but no sections had been deleted at the time of the inspection.

5. RHR Heat Exchanger Leak (Loop A)

The licensee informed the inspectors that they had determined that the primary side of the subject heat exchanger was increasing toward the same pressure as the service water side indicating a secondary to primary leak. They stated that the leak was small and they thought the leak may be past a gasket separating the primary and secondary. The licensee does not intend to use the subject heat exchanger unless it is required. The system is still operable. The licensee intends to disassemble the heat exchanger during the January outage.

REPORT DETAILS

Section II

Prepared By: C. H. Brown

Reviewed By: H. C. Dance 1/20/75 (Date)

1. Maintenance - Areas of Review

The following areas were reviewed in selected maintenance activities (Paragraph 2) performed at the facility. The maintenance activities reviewed were performed during January 1, thru June 30, 1974, unless otherwise stated under the particular activity.

a. Required administrative approvals were obtained prior to initiating the work.

b. Activities were accomplished using approved procedures.

c. Required inspections were performed.

d. Required functional testing and necessary calibration was performed prior to returning system to service.

e. Required quality control records were available.

f. Work was accomplished by qualified personnel.

g. Verification that limiting conditions for operation were met.

2. Maintenance Activities

The following maintenance activities were reviewed in accordance with Paragraph 1 above. Comments are noted where applicable.

a. Repair of leaking automatic pressure relief valve was satisfactory to date. The valve was removed and the penetration blank flanged. The repair of the valve is to be completed when the necessary spare parts arrive. The Technical Specifications allow plant operation with one safety/relief valve inoperable.

The automatic pressure relief function was transferred to another safety/relief valve before the startup of November 21, 1974, to maintain the required three operable automatic pressure relief valves.

b. Minor repairs of the reactor head vent valve X-DV-1 and the head spray valve MO-2026.

No deficiencies were noted.

c. Valve CRD-102 gate replacement was completed on July 4, 1974. One deficiency was noted. The last step of the approved procedure on use of freeze seals required a post liquid penetrant test which was not performed. The licensee stated that cognizant personnel had decided that a visual inspection and operational hydrostatic test was sufficient, but had not documented the change. The licensee subsequently informed the inspector that the liquid penetrant inspection would be performed during the week of December 16, 1974.

The valve CRD-102 is a 3/4" gate valve. There are four of these valves per each of 146 drives at the facility. The licensee considered the probability was minimal that any of these valves could fail in the same manner. The valve gate "T" slot ears broke off and prevented the valve from opening. The licensee stated that the new valve gates in spare parts were manufactured with more stringent requirement. Review of the licensee's investigation of the problem indicated a detailed technical review of the mode of failure had been performed.

During the review of this maintenance package it was noted that the procedure for Work Request Authorization (WRA), ACD 3.6, contained no provision for making changes to a WRA after it had been approved and work was commenced.

d. Replacement of control rod drive incorrect sized inner filters in drives 18 - 35 and 26 - 35.

No deficiencies were noted.

e. Internal repair of feedwater check valves FW-91-1 and 97-2.

No deficiencies were noted.

f. MSIV AO-2-80A valve body distortion repair.

No deficiencies were noted.

g. MSIV AO-2-86B and -86C solenoid plunger replacement.

No deficiencies were noted.

h. Preventative maintenance of the Emergency Diesel Generator (EDG) air starting systems was reviewed. This included the two starting systems for each EDG and the four air compressors. No deficiencies were noted.

i. Preventative maintenance of the RHR service water pump motors. The review indicated that the motors were meggered as per the procedure, but the ratio of the 60 second reading to the 30 second reading was not calculated on all motor records as required by the procedure. In addition the corrective action taken as required by certain ratios was not included on the procedure.

The licensee stated that he would have to ask the maintenance group that performed the inspection of the motors to determine if the motors had been dried out as indicated by the ratio of megger reading. The inspector informed the licensee that the performance of the work should be included in the data sheet along with the megger reading. The licensee agreed to review this area.

j. RHR motor and valve operator breaker and thermal overload preventive maintenance.

No deficiencies were noted.

k. EDG preventive maintenance.

The procedure was noted to have changes written into several steps without being initialed. The licensee stated that the check of the diesel had been performed by the vendor's representative and these were changes he recommended after he had performed the procedure as written. The licensee agreed that this was not a proper use of a completed procedure and would note on the procedure the reason for the apparent changes. No other deficiencies were noted.

1. RHR pump motors preventative maintenance.

The one deficiency noted was the same as stated in Paragraph (i) RHR SW pump motors.

m. Corrective maintenance of RHR valve MO-2008.

The set screws for the stem guide had loosend and allowed the stem to rotate. The set screws were replaced and staked. No deficiencies were noted in the records of the work. The staking of the stem guide set screws was performed on thirteen other similar valves to prevent a similar failure.

n. Shock suppressor maintenance.

The certification papers for the replacement parts were available.

No deficiencies were noted.

3. Design Changes - Areas of Review

The following items were verified to have been performed (if applicable) for design changes completed (See Paragraph 4) at the facility.

a. Safety evaluation made in accordance with 10 CFR 50.59.

b. That the design change was reviewed and approved in accordance with Technical Specifications on established QA/QC controls.

c. That the change was made with a formal procedure that included:

(1) Identification of specifications and codes governing work.

(2) Identification of inspection required by code or standards.

(3) Acceptance test procedures which define acceptance values or acceptance standards.

d. That the design change acceptance test records includes.

(1) That procedure acceptance criteria was met and that the modified equipment performance conforms with Technical Specifications requirements as applicable.

(2) The review and approval of modified equipment performance.

e. That any required revision to operating procedures was completed and that the revision was made and approved in accordance with the Technical Specifications.

f. That the as-built drawings were changed to reflect the design change.

4. Design Changes Reviewed

The following design changes that had been performed during the period January 1 to June 30, 1974, were reviewed per Paragraph 3 of this report.

In the review of the safety evaluations that the licensee performed for the design changes, it was not immediately evident that all areas required by 10 CFR 50.59 had been covered. After a close review of the evaluations, in conjunction with the procedure covering the performance of the evaluation, the inspector determined all areas had been reviewed although not specifically referenced. The inspector was shown a draft procedure revision that included a form that would show these areas have been reviewed. The licensee stated that the present plan was to have this revision implemented in January, 1975.

The as-built drawings with the modifications incorporated had not returned to the site from their headquarters drafting department at the time of the inspection. Marked up drawings for items (f) and (i) were noted to be in the work package.

a. Modification of the rod worth minimizer rod sequence structure.

No deficiencies were noted.

b. Temporary bypass valve around CRD-102.

The review of the applicable items were satisfactory with the exception that the safety evaluation was approved by the Operations Committee (OC) on June 14, 1974, and the work had been completed on June 10, 1974, and the drive was declared operable on June 11, and placed in service. It was noted that in the work package an entry had been made stating that a quorum of the OC membership had approved the package on June 12. The licensee was informed that this was considered to be a violation of Appendix B, Criterion V and their procedures. The procedures do not call a definite order of performing the various steps of approval, but it is implied, in that the OC can approve or disapprove a proposed design change, that the approval of change is given before the work starts.

The bypass valve was removed during the repair of valve CRD102 in July 1974 as discussed in Paragraph 2.c.

c MSIV Modifications

The safety evaluation (SAI-164) covered all modifications to be performed by the work package.

No deficiencies were noted on work completed to date.

d. Installation of an additional isolation valve in the feedwater cleanup line.

No deficiencies were noted.

e. The addition of automatic control to the feedwater low flow regulation valve. The last test on the operation of the automatic control, actually control reactor water level, had not been performed as of the December, 1974 inspection.

No deficiencies were noted on work performed to date.

f. HPCI and RCIC turbine signal convertors modifications.

No deficiencies were noted.

g. The addition of HPIC and RCIC exhaust line vacuum breakers. No deficiencies were noted. For this item the torus stresses due to the HPCI and RCIC support system loads had been analysed and no problems were identified.

h. Removal of SBLC flow switch.

The paddle vane was the only part removed; the original pipe closure with the transmitter was replaced and seal welded. The operational procedure was verified to have been reviewed on May 17, 1974.

No deficiencies were noted.

5. Work Request and Surveillance Test Forms

The review of the Work Request Authorizations and Surveillance Tests, that had been completed to perform various jobs at the facility, showed that the subject forms, in general, had not been completely filled in. The blanks were of the information type and could be found in other records. The authorizing signatures were on the forms reviewed.

In the review of the procedures and discussions held with several of the licensee's personnel, it was noted that the instructions for filling out the forms were subject to interpretation and therefore the completed forms were inconsistant.

6. Motor Operated Valve Overload Indication

In a discussion held with several of the licensee's personnel it was noted that there would be no indication in the control room should an overload protective device open in the power supply to a motor operated valve. The overload device opening would render the valve inoperable. The licensee was requested to review this matter and also to provide an interim measure to assure that the overload was closed after each operation of the valve. The licensee agreed to review these items for the safety systems and an operation directive would be issued as an interim measure.