

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Operations Inspection

IE Inspection Report No. 050-155/75-12

Licensee: Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Big Rock Point Nuclear Plant
Charlevoix, Michigan

License No. DPR-6
Category: C

Type of Licensee: BWR (GE) 240 Mwt

Type of Inspection: Routine, Announced

Dates of Inspection: September 22-26, 1975

Principal Inspector: *D. R. Hunter*
D. R. Hunter

10/23/75
(Date)

Accompanying Inspector: None

Reviewed By: *E. A. Jordan*
E. A. Jordan
Senior Inspector
Reactor Operations Branch

10/23/75
(Date)

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SUMMARY OF FINDINGS

Inspection Summary

Inspection of September 22-26, (75-15): Reviewed abnormal occurrence reports; records; design and design change modifications; maintenance activities; items of noncompliance; inspector identified items; safety limits, limiting safety systems settings, and limiting conditions for operations; unresolved items; and a facility tour. One item of noncompliance was identified related to a facility modification.

Enforcement Items

A. Violations

None.

B. Infractions

Contrary to 10 CFR 50.59, a documented safety evaluation was not provided as required prior to a modification involving the emergency electrical system. (Report Details, Paragraph 1.d)

This infraction had the potential for causing or contributing to an occurrence related to health and safety.

C. Deficiencies

None.

Licensee Action on Previously Identified Enforcement Matters

None.

Other Significant Findings

A. Systems and Components

None.

B. Facility Items (Plans and Procedures)

On September 16, 1975, seven mixed oxide fuel assemblies were received on site and were stored in the new fuel storage area.

On September 25, 1975, twenty uranium oxide fuel assemblies were received on site, off loaded, and remain in the shipping containers in the containment sphere laydown area in preparation for storage.

C. Managerial Items

Mr. G. B. Szczotka replaced Mr. J. J. Zabritski as Quality Assurance Engineer at the Big Rock Point facility. Mr. Szczotka was previously assigned to the Quality Assurance department at the Palisades Nuclear Station.

D. Noncompliance Identified and Corrected by Licensee

Contrary to Criterion V of Appendix B to 10 CFR 50, the failure to perform a modification within the procedural guidelines resulted in an unauthorized modification to a safety related system. This item is an infraction. (Report Details, Paragraph 1.b)

E. Deviations

None.

F. Status of Previously Reported Unresolved Items

1. The operation of the liquid poison tank level above the high level alarm light appears to be adequate and, based on the completion of the design review during the next refueling outage, is considered acceptable. (Report Details, Paragraph 6.a)
2. The operation and the operating procedures for the personnel access hatch, the equipment access hatch, and the emergency escape lock were reviewed and no apparent discrepancies were noted. This item is considered acceptable. (Report Details, Paragraph 6.i)
3. The review and scope of review of plant operations by the plant review committee was evaluated and is considered acceptable. (Report Details, Paragraph 6.j)

Management Interview

The management interview was conducted on September 26, 1974, with the following persons present:

- C. J. Hartman, Plant Superintendent
- D. E. DeMoor, Technical Engineer
- G. C. Tyson, Maintenance Engineer
- C. E. Axtell, Chemistry and Radiological Protection Supervisor
- R. E. Schrader, I&C Supervisor

A. Abnormal Occurrence Reports

The inspector stated that the review of Abnormal Occurrence Reports 19-75, 20-75, 21-75, and 22-75 indicated two apparent items of noncompliance (AO 20-75 and AO 22-75). The licensee acknowledged the statement. (Report Details, Paragraph 1)

B. Plant Records

The inspector noted that a number of areas were reviewed during the inspection and that record retention appeared adequate with exceptions, as noted. (Report Details, Paragraph 2)

1. The completion of the plant safety related systems, components, and structures list/prints (Q-lists) were not yet apparent as a part of the overall administrative program.
2. The plant operational and maintenance records, in certain areas did not include the required records of superseded procedures.
3. The Plant Quality Assurance Records, including the Plant History File, are presently divided among the responsible supervisors in lieu of being stored in a single approved area.

C. Items of Noncompliance

The inspector stated that the closeout of the items of noncompliance associated with Inspection Report No. 050-155/75-05 would be delayed until after completion of the NRC review of the latest abnormal occurrences (AO 20-75 and 22-75). These two occurrences appear to be repeat items and the overall program of facility changes will require further evaluation. The licensee acknowledged the above statement. (Report Details, Paragraph 5)

The inspector also noted that the corrective actions associated with Inspection Report No. 050-155/75-10 were in progress. The licensee indicated that these corrective actions should be completed by October 1, 1975, as indicated in the response to Inspection Report No. 050-155/75-10.

D. Facility Tour

The inspector stated that a limited facility tour was conducted and no major discrepancies were noted. The licensee acknowledged the statement. (Report Details, Paragraph 8)

E. Personnel, Equipment, and Escape Hatches

The inspector stated that the review of the operation and operating procedures for the personnel access hatch, equipment access hatch, and the emergency escape lock revealed no apparent discrepancies and appeared acceptable. The licensee acknowledged the statement. (Report Details, Paragraph 6.c)

F. Review and Scope of Review of Plant Operations

The inspector stated that the verification of the review and scope of review of the plant operations by the plant review committee was completed and that no major discrepancies were noted. The inspector stated that the review and scope of review appeared acceptable. (Report Details, Paragraph 6.j)

REPORT DETAILS

Persons Contacted

C. J. Hartman, Plant Superintendent
D. E. DeMoor, Technical Engineer
G. C. Tyson, Maintenance Engineer
J. A. Axtell, Chemistry and Radiation Protection Supervisor
R. E. Schrader, Instrument and Control Supervisor
T. M. Brun, Assistant Chemistry and Radiation Protection Supervisor
R. C. Abel, Operations Engineer
J. L. Keumin, Associate Engineer
G. M. Evans, Engineer
R. W. Voll, Reactor Engineer
G. B. Szczotka, Quality Assurance Engineer
E. McNamara, Shift Supervisor
P. C. Sevener, Shift Supervisor

1. Review of Abnormal Occurrence Reports

The following abnormal occurrence reports were reviewed to ascertain that the reviews, evaluations, information, and corrective actions were as reported to the plant management and the NRC.

- a. AO-50-155/19-75, Reactor cleanup system valves design deficiency reported on September 9, 1975. The licensee reported^{1/} that during a design review of the resin sluice valves as a result of an item of noncompliance^{2/}, it was revealed that valves (CV-4091, CV-4092, CV-4093, and the manual valves in series with CV-4092, and CV-4093) were deficient in one of two ways depending upon the seat/seal materials utilized. Nylon-neoprene seals and seats are rated at only 180°F (below the DBA design criteria) and teflon seals and seats are rated at only 1000 psig (below the design pressure on the system). The inspector reviewed the immediate corrective actions taken by the licensee which included tagging of the manual valves inside the containment and also tagging the manual valves on the headers outside the containment. Even though the outside valves appear to be of the same design, they are at a distance from the containment and should not be exposed to the high temperature conditions (235°F), in the unlikely event of a loss of coolant accident. The low pressure piping and valves are also protected by an installed safety valve which would discharge to the containment sump at about 175 psig if the isolation valves were to

1/ Ltr, CP to DL, dtd 9/18/75.

2/ IE:III Inspection Rpt No. 050-155/75-10.

experience limited leakage. The inspector also verified that all of the valves (remote and manual operated) were normally closed except when being used to sluice resins. Under these conditions the containment integrity appeared to have been protected within the design of the system, during previous operations.

During the review of the occurrence the inspector noted that the outside manual resin sluice valves were not designated as containment isolation valves and maintained under administrative control although they were the first valves outside the containment. The inspector asked the licensee to consider the possibility of placing these valves under administrative control. The inspector and the licensee representative reviewed other plant systems to determine if any similar valve arrangements existed and none were noted.

- b. AO 50-155/20-75, discovery of unauthorized addition of load to emergency lighting panel on September 9, 1975. The licensee reported^{3/} that a small electrical load was added to the emergency panel 5L as a result of the work in the field being completed without proper review and approval. The inspector verified that a minor non-safety related modification (FC-310) was to be performed, and the field work resulted in wiring a portion of a lighting circuit to the 5L panel (MP 75-SPS-225-01). The inspector noted the issuance of another facility change (FC-318) which will correct the situation. The inspector verified that the 2 amp load was only a small fraction of the battery load in the event of a loss of offsite power. The failure to perform this modification within the intent of the facility change (FC-310) resulted in an unauthorized, unreviewed modification to a safety related system. The breakdown in administrative controls which caused the occurrence was identified by the licensee and is considered to be an item of noncompliance with Criteria V of Appendix B to 10 CFR 50.
- c. AO 50-155/21-75, Containment isolation valve testing procedure inadequate (T 365-04) on September 9, 1975. The licensee reported^{4/} that the leakrate test performed on valves CV-4091, CV-4092, and CV-4093 was not valid due to using a telltale tap located on the wrong line. The discrepancy was discovered while tracing the resin sluice lines and valves because of other problems requiring detailed valve tagging operations. The inspector verified the performance of the special operations procedure, O-CIS-1(0), performed

3/ Ltr, CP to DL, dtd 9/19/75.

4/ Ltr, CP to DL, dtd 9/19/75.

on September 12, 1975, to leak test the valves (CV-4091, CV-4092, and CV-4093) via an opened valve flange. The valves appeared to have been effectively leak tight (a few drops/minute). This discrepancy has apparently existed since early plant construction, although the leak rate testing has only been performed since 1973. The inspector noted that a system modification appears to be warranted in order to adequately leak test the valves in the future.

- d. AO 50-155/22-75, Unauthorized addition of load to emergency A-C power panel 8L in July 1975, classified as an abnormal occurrence on September 12, 1975. The licensee reported^{5/} that during the installation of the new system in 1975, electrical equipment was connected to the emergency panel 8L. Since the installation was not declared safety related, no facility change form was issued to cover the modification even though the 1.25 KVA load was connected to the emergency bus. The inspector verified that the load was a small portion of the emergency-blackout load. The inspector noted that a facility change was being considered as a method to review the modification and to alter the circuit as required to provide appropriate corrective action. This apparently included providing power to the alarm and communications systems from the bus supplied by the diesel generator. The licensee representative indicated that the inadequacy was discovered because of a loss of power to a system computer during the weekly testing of the emergency diesel generator. An investigation into the intermittent failure of the computer revealed the unreviewed loads connected to the emergency bus; and a further review determined that no facility change had been initiated. At that time the item was classified as an abnormal occurrence. The inspector noted that this occurrence appeared to indicate a problem in the area of major modifications performed with offsite engineering assistance. (Report Details, Paragraph 5) The failure to perform the safety related modification (emergency power system) in accordance with the facility change procedures and failure to provide a documented safety evaluation, is considered an item of noncompliance pursuant to 10 CFR 50.59. This item is an infraction.

2. Plant Records

The inspector reviewed the plant records program to ascertain whether the control, storage, retention, and retrieval of records and documents was in conformance with the applicable specifications and procedures.

^{5/} CP to DL, ltr dtd 9/22/75.

- a. The as-built drawing control was reviewed by the inspector. It was noted that a newly implemented design change notice form (DCN) was being utilized to record the as-built drawing changes. The inspector reviewed several drawings to insure design changes/drawing changes had been entered and documented.
- (1) Heating and Ventilation System (M-125)
- Facility Change (FC-263) performed to modify the ventilation supply valve solenoid valves (SV-9051 and SV-9052).
- Facility Change (FC-218) performed to provide a dew point sampling station.
- (2) Post Incident System (M-106/123)
- Facility Change (FC-268) performed to provide fill water makeup to the main condenser for emergency core cooling.
- Facility Change (FC-270) performed to provide an open-ended sight glass (LG-3676) on the core spray heat exchanger for testing purposes.
- (3) Station Power System (WO-740)
- Facility Change (FC-278) to provide a new battery charger and under-voltage and ground detector relays.
- (4) The as-built drawings were stored in the computer room on print racks due to a lack of the new storage facility which is being designed at the present time.
- b. The inspector reviewed the method of updating the controlled drawings utilized by the operations group for operations and tagging purposes. The inspector noted that the operations engineer updates the operations drawings as the facility changes are performed. The operators utilize these drawings ($\frac{1}{2}$ size) and the valve check lists to perform operating evolutions. It was noted by the inspector that the drawings used by operations were not up-to-date in all cases (vents and drains). This fact was indicated as a possible system and personnel safety related problem by the inspector. These minor drawing discrepancies were recognized by the operating staff and have apparently existed since the initial plant construction.

c. Review of operations department records

- (1) Generation/Station Power/Substation Data Sheets-July 1, 1975, through September 22, 1975. The inspector noted the emergency diesel generator readings on several occasions during the review period. The inspector noted that on three occasions that the diesel generator reading were taken, the phase amperes were not balanced.

7/31/75	phase amps	50,30, and 0 0, 25, and 60
8/21/75	phase-amps	80, 90, and 100

The inspector verified that the first two sets of readings were the result of a fuse failure (vibration). The latter set of readings was apparently a meter accuracy problem. The inspector verified that the log sheets had been reviewed. The log sheets were stored in a file cabinet drawer in the shift supervisors office.

- (2) Control Room Log Sheets-July 1, 1975, through September 22, 1975. The inspector reviewed the general log sheets and specific log sheet readings associated with nuclear safety related systems.

Reactor/steam drum pressure - 1320 psig
Steam flow - 788,000 (lbs/hr)
Feedwater temperature - 357 (°F)
NMS 1, 2, and 3 - 98, 97, 97 (percent)
Off-gas airflow - 11.3 (scf)
CRD positions - pattern (E-4 at 19)
LPS N₂ pressure - 2060 (psig)
Ventilation System N₂ pressure - 2000 (psig)
LPS tank temp - 151 (°F)
Emergency DG fuel oil level - 30.2 (inches)
Incore Instruments - 18 or 254 in service
Stack gas background - 65 (CPS)

The inspector noted that all the above readings for the specified period of review appeared to be normal. The off-gas monitor was noted to be out of service for maintenance on several occasions on July 29, 1975. The control room logs had been reviewed and were stored in a file cabinet in the shift supervisors office.

(3) Critical approaches and period reports

Data sheets were reviewed for the startup in June 6-7, 1975. The data sheets and previous data sheets were stored in a file cabinet drawer in the Shift Supervisors office.

- (4) Heat balance data sheets-July 6, 1975, through September 14, 1975. The review of the heat balance data sheets and storage in the shift supervisors office revealed no apparent discrepancies. The heat balances indicate no limits on reactor power level were exceeded and the power level on September 14, 1975, was 199.9 MWt at 62.6 MWe. The heat balance data sheets were reviewed by the reactor engineer.

(5) Hot channel worksheets

The hot channel worksheets were stored in the shift supervisors office in a file cabinet drawer. The specific review of two selected worksheets indicated no apparent discrepancies.

August 31, 1975	D-72 04-53
Thermal Power	198.4 (MWt)
Core Avg heat flux	145.466 (BTU/hr-ft ²)
Hot channel peaking factor	1.82
Hot channel rod size factor	1.079
Core max. heat flux	285,644 (BTU/hr-ft ²)
MCHFR	2.36
MAPLHGR (9.1165 or 92% of TS-MAX)	8.40 (kw/ft)

September 14, 1975	FS7 05-58
Thermal Power	200.0 (MWt)
Core Avg. heat flux	145.861 (BTU/hr-ft ²)
Hot channel peaking factor	2.40
Hot channel rod size factor	1.0668
Core max. heat flux	373,451 (BTU/hr-ft ²)
MCHFR	2.36
MAPLHGR	8.10 (kw/ft)

(6) Primary System Leakrate Tests

June 1, 1975, through September 19, 1975 the primary system leakrate tests were stored in the shift supervisors office in a file cabinet drawer. The review of the leakrate calculation on 9/19/75 indicated 0.156 gpm unidentified and 2.26 gpm identified. No apparent discrepancies were noted.

(7) Scram Sheets

The record of all scrams, numerically sequenced, were stored in the shift supervisor's office in a file cabinet drawer. No apparent discrepancies were noted.

(8) Plant Operating Charts

The review of chart storage in the computer room in metal shelves included verification of selected records. No discrepancies were identified.

Neutron Monitoring System Charts

Channels 1, 2 and 3

Channels 4 and 6

Channels 5 and 7

Area Radiation Monitor System Charts

Process Radiation Monitor System Charts

Control Rod Drive System

CRD Temperature Charts

Stack Gas System Charts

Plant Conductivity Charts (selected cond.)

Plant Temperature Charts (selected equip.)

Incore Flux System Charts

Cleanup System

Differential Pressure Charts

Flow charts

Radwaste Demin. Conductivity Charts

Condensate Demin. Conductivity Charts

Reactor Protection Channels 1 and 2 Charts

Recirculation System Flow Charts

Fire Protection System Pressure Charts

Reactor Vessel Level/Feedwater Flow Charts

Reactor Vessel Pressure/Steam Flow Charts

Reactor Vessel/Steam Drum Temperature Charts

Control Room Operators Logbooks

Reactor Operator Logbooks

Radioactive Waste Disposal Logbooks

Makeup/Condensate Demin. Logbooks

(9) Operation Surveillance Tests

The completed tests were stored in the shift supervisors office in a file cabinet.

d. Review of Maintenance Department Records

The review of the storage and availability of records in the maintenance trailer was completed. No apparent discrepancies were noted.

- (1) Maintenance activities and maintenance orders.
- (2) Superseded maintenance procedures after June of 1975 and others if they were used in the field (records of maintenance).
- (3) Welding qualifications.
- (4) Facility changes.
- (5) Nondestructive testing (NDT) results.
- (6) Inservice inspection results.
- (7) Surveillance testing results (new program).
- (8) Maintenance training and qualification records.

The records were filed in cabinets or in loose leaf notebooks in the trailer.

e. Review of the Instrument and Control Department Records

The review of the storage and availability of records in the I and C supervisors office was completed.

- (1) Maintenance activities and maintenance forms
- (2) Facility changes
- (3) Superseded maintenance and test procedures

The procedures were only available if they were performed in the field and returned to the I and C shop for retention. If two or more revisions were performed between usages, no superseded procedures were available. The record of review (QA-05) by the PRC was retained as a permanent record of procedure change.

- (4) Surveillance tests
- (5) I and C training and qualifications

The inspector noted a training program was established for the technicians to provide two hours per week classroom training.

f. Chemistry and Radiological Department Records

The review of the storage availability of records in the Rad Pro supervisors office was completed. Records reviewed include:

- (1) Monthly plant radiation and survey file
- (2) Personnel exposure records
- (3) Radioactive waste release records
 - Gaseous
 - Liquid
- (4) Radioactive waste shipment record
- (5) Records of radioactive shipments
- (6) Emergency plan drill records
- (7) Sealed source leak test records
- (8) Superseded procedures

The procedures were only available (except Emergency Plan) if they were utilized and filed.

(9) Surveillance tests

(10) Water chemistry records

Review of selected chemistry trend records maintained at the plant (1975) revealed no apparent discrepancies.

Primary Coolant

pH
Conductivity
Boron Concentrations

Cleanup Demineralizer

Turbidity
Conductivity
pH

Reactor Cooling Water System

Chromates
Conductivity
Liquid Poison Tank
Pentaborate (20.5%, 2/19/75)

g. Technical Department and Administrative Supervisor Records

A review of selected record storage and availability of the records in the administrative assistants (clerks) office was performed:

- (1) Nonroutine reports to the NRC (AO, UE, SR)
- (2) Technical Specification and Final Hazards Summary Report file
- (3) Plant Review Committee minutes
- (4) Safety and Audit Review Board minutes
- (5) AEC/NRC correspondence file (chronological or subject)
- (6) Plant Safety Meeting records
- (7) Operating records

h. Weaknesses in the overall record maintenance and record control systems as indicated in the applicable subparagraph.

- (1) Records are stored in various office areas throughout the facility in file cabinets, binders, and shelves which do

not appear to meet the guidelines as established by ANSI N 45. 2. 9. The licensee has recognized the lack of adequate storage and an appropriate storage facility is being planned by the licensee.

- (2) Responsibility for record retention has been assigned to specific supervisors. The detailed written procedures for document control, retention, storage and retrieval have not yet been prepared.
- (3) Detailed written procedures relating to records of procedure changes and superceded procedures have not been prepared. Procedure change records are available in the form of the completed procedures and the record of review of the procedure changes by the Plant Review Committee is available (Form QA-05).

3. Design and Design Changes and Modifications

The inspector reviewed selected facility changes to insure the activities were performed in accordance with applicable procedures.

- a. Control Rod Drive System (CRD), FC-269 dated July 25, 1974, performed to provide a casing drain on #1 and #2 CRD pumps. The drains were added as a result of seal leakage^{6/} entering the lube oil system. The plant was at normal power operations and the pump operation was not affected by the modification. No apparent discrepancies were noted.
- b. Reactor Vessel Internals (RVI), FC-287, dated February 7, 1975, performed to modify the main beam clamplock and tack weld the bolts to the upper jaw of the main beam clamplock. The modification was performed as a result of a failure ^{7/} of the assembly. No apparent discrepancies were noted.

4. Maintenance Activities

The inspector reviewed the following maintenance activities to insure the items were performed in accordance with applicable procedures.

- a. Electrical Power System (75-EPS-15701) dated June 6, 1975. The emergency diesel generator starter solenoid contacts were inspected.^{8/} No apparent discrepancies were noted.

- 6/ CP to DL, ltr dtd 6/26/74.
7/ CP to DL, ltr dtd 2/21/75.
8/ CP to DL, ltr dtd 11/26/74.

- b. Control Rod Drive System (CRD-455(1)) dated February 19, 1975. The control rod jog bypass on withdrawal was removed and the system tested to insure no continued rod withdrawal function. No apparent discrepancies were noted.

5. Items of Noncompliance

- a. Inspection Report 75-05 was transmitted to Consumers on May 20, 1975, and requested a response regarding certain facility changes performed at the Big Rock Plant Facility. In response^{9/} to this request Consumers stated generally that apparent inadequacies in the area of facility changes should be corrected in the future through utilization of the new Administrative Procedures. The inspector review of Administrative Procedures 1.9 and the Quality Assurance Manual III, section 3 revealed discrepancies between the two documents with regards to processing facility changes/modifications.

The Big Rock plant technical specification (Palisades T.S. section 6) requires that the Plant Review Committee review all proposed facility changes. The Administrative Procedure 1.9.A.1 and A.2 for major modifications does not appear to follow the Quality Assurance Manual nor the Technical Specifications. The inspector verified that the plant staff was aware of this apparent discrepancy and that all facility changes/modifications are being processed in accordance with the Quality Assurance Manual, Technical Specifications and 10 CFR 50.59 requirements. As a result of Abnormal Occurrences AO 20-75 and 22-75 which represent continued facility change problems (Paragraphs 1b and 1d) this item remains unresolved.

6. Outstanding Inspection Items

- a. The review of the status of engineering study related to the Liquid Poison System Tank unresolved item^{10/} revealed a number of significant items. The completion of the design review on the LPS tank will not be completed until the outage in January 1976. The review will apparently require an inspection of the tank level floats to determine the exact dimensions relative to height and displacement. Rough calculations by the technical engineer indicate that the free-floodable space above the high level light was approximately twenty gallons. The present concentration in the tank is 20.5 percent by weight pentaborate, and a twenty gallon dilution of the 850 gallons of solution would not

^{9/} CP to IE:III, ltd dtd 6/28/75.

^{10/} IE Inspection Rpt No. 050-155/75-10.

decrease the concentration below the 19 percent by weight limit. The inspector noted that there is no installed (piped) source of makeup water to the tank and that there was apparently no history of explosive valves leaking. It appears there is reasonable assurance that no technical specification has been violated and maintaining the level above the high level light appears conservative. The completion of the design review will allow the establishment of administrative limits in order to preclude exceeding the technical specifications under any postulated allowable level-concentration combination. The design review had also revealed a number of minor problems with the liquid poison system procedures. The system conditions and operations as indicated by the design review at the present time appear acceptable.

- b. Escape lock inner door, outside operating lever interference^{11/}

The inspector verified during the facility tour, that the operating level/conduit interference had been cleared by adjusting the operating lever.

- c. Emergency diesel generator circuit breaker change^{12/}

The inspector noted that the indicated facility change required to eliminate the use of local caution signs and jumpers when either of the diesel generator bus tie breakers is racked out (the diesel generator output breaker closure is defeated without the jumper installed) had not been completed. The licensee representative indicated that the item was being tracked as an action item (AIR BR 22-75).

- d. NMS channels (AO 01-74)^{13/ 14/ 15/}

The inspector reviewed the status of the corrective action required to eliminate the nonconservative failure in the 150V DC power supply for the power range picoammeters. The licensee representative stated that the last communication with General Electric engineering occurred through upper management on August 27, 1975, and the modification package was being assembled at that time.

- e. Unusual Event 11-74^{16/}, dated July 18, 1974, reactor shutdown system control relay failure. The inspector reviewed the failure history of GE HFA relay coils at the plant. Thirty two (32) HFA relays are utilized in safety related systems (10 relays normally energized, 2 relays with 50% duty, and

^{11/} IE:III Inspection Rpt No. 050-155/75-11.

^{12/} RO Inspection Rpt No. 050-155/73-02.

^{13/} RO Inspection Rpt No. 050-155/73-03

^{14/} IE:III Inspection Rpt No. 050-155/75-08.

^{15/} IE:III Inspection Rpt No. 050-155/75-11.

^{16/} CP to DL, ltr dtd 8/16/74.

20 relays normally deenergized). The inspector verified that the RPS relays 1K5A and 1K5B were replaced (RPS-74-1010 maintenance order) in 1974 and the RPS relays 1K4A and 1K4B (75-RPS-1002 maintenance order) and 2K4A and 2K4B (75-RPS-1003 maintenance order) were replaced in 1975. The inspector noted that no other failures had occurred in safety related systems. This item is considered resolved.

f. Picoammeter cable replacement 17/ 18/ 19/

The inspector reviewed with the licensee representative the replacement of several picoammeter cable/detector units. The licensee representative indicated that the high temperature in the area of the cables cause them to become brittle after they cool. If the cables are flexed in this brittle condition when they are at ambient temperatures, cracking and breakdown of insulation apparently occurs. The licensee has spare cable/detector units prefabricated for installation as required and a review of the airflow to the detector areas is continuing.

g. Core spray room outside floor drain

The inspector verified that the core spray rooms floor drain flowpath was to the radioactive waste system. 20/ 21/ 22/

h. Air compressor area floor drains

The inspector verified that the floor drains in the area of the air compressors (previously covered by the removed station battery cells) flowed to the turbine building sump. The licensee representative indicated this completed the survey of all equipment drains as a result of a previous abnormal occurrence. 23 24/ 25/ This item is considered resolved.

- 17/ RO Inspection Rpt No. 050-1,5/73-01.
- 18/ RO Inspection Rpt No. 050-1,5/73-04.
- 19/ RO Inspection Rpt No. 050-1455/74-01
- 20/ CP to DL, ltr dtd 1/31/75.
- 21/ IE:III Inspection Rpt No. 050-155/75-10.
- 22/ IE:III Inspection Rpt No. 050-155/75-11.
- 23/ CP to DL, ltr dtd 1/31/75.
- 24/ IE:III Inspection Rpt No. 050-155/75-10.
- 25/ IE:III Inspection Rpt No. 050-155/75-11.
- 26/ IE:III Inspection Rpt No. 050-155/74-11.

i. Personnel, equipment, and escape hatches

The inspector reviewed the licensee evaluation and actions concerning the operation of the personnel and equipment hatches.^{26/} The actions included caution tagging the hatches mechanical interlock handles - to be left in the "mid-travel" or "atmosphere locking ring" position to provide proper equalizer valve/check valve operation. The inspector reviewed an instruction memo to all personnel stipulating the personnel and equipment hatch mechanical interlock/equalizer-check valve operations. The inspector noted that consideration is being given to other design improvements to insure proper operation and monitoring of the hatch mechanical interlock systems. The inspector reviewed the newly written and approved operation procedures for the hatches. The operation of the hatches as indicated appears acceptable. This item is considered resolved.

j. The review and scope of review of plant operations^{27/} was evaluated by the inspector. The licensee had completed a review of the facility program to establish the requirements and methods utilized by the Plant Review Committee to perform and document this technical specification requirement. The inspector verified the established review of operations logs, data sheets, and selected records utilizing the review form QA-05. The plant superintendent or his designee insures that the required PRC quorum reviews the packages for each day. This manner of specifically reviewing operations appears acceptable and the item is considered resolved.

k. The inspector reviewed the required actions at specified primary water qualities, as established by the technical specification 4.1.2(b).^{28/} The review of off-normal procedure D2.28 Abnormal Water Quality revealed no apparent discrepancies. During the review of an abnormal occurrence concerning a chemistry sampling program^{29/}, the inspector noted the need for acceptance criteria on certain chemistry data sheets. The licensee representative noted that he was in the process of reviewing procedures at that time in preparation for the new administrative procedures and technical specification programs.

^{27/} Ibid.

^{28/} RO Inspection Rpt No. 050-155/74-04.

^{29/} IE:III Inspection Rpt No. 050-155/75-11.

7. Safety Limits, Limiting Safety Systems Setpoints, and Limiting Conditions for Operation

The review of the technical specification requirements were completed during this inspection. No apparent discrepancies were noted.

- a. Reactor cleanup system during the week of September 8, 1975, including the performance of special operating procedure, O-CIS-1(0) performed on September 12, 1975, to assure resin sluice valve leak tightness.^{30/ 31/}
- b. Review of selected operations department records for the period of July 1, 1975, through September 22, 1975.
- c. Review of the chemistry and radiological department water chemistry trend plots for 1975.
- d. Facility change (FC-267) performed on July 25, 1974, - CRD system.
- e. Facility change (FC-287) performed on February 7, 1975 - RVI system.
- f. Maintenance activity (75-EPS-15701) dated June 6, 1975 - EPS system.
- g. Maintenance activity (CRD-455) dated February 19, 1975, - CRD systems.
- h. Review of the operations of the personnel and equipment hatches and the emergency escape lock hatches. The review includes the review of the newly issued operating procedure for the hatches.

8. Facility Tour

- a. The inspector reviewed the control room status including observing the control rod sequence at approximately 60 percent power after a forced reduction due to a ground on one condensate pump motor circuit.
- b. The inspector viewed the emergency diesel generator room for cleanliness, diesel oil leaks, and equipment storage. The inspector observed the hand priming pump to be in the down position and held firmly by the packing gland nut.

30/ CP to DL, ltr dtd 9/18/75.

31/ CP to DL, ltr dtd 9/19/75.

- c. The inspector noted that the temporary cooling water supply (service water to the heater coils) to the containment ventilation supply air system was not being utilized at the present time due to cooler weather.
- d. The inspector reviewed the controls established on the large maintenance rollup door to prevent exiting the restricted controlled area without passing a frisker station. The inspector discussed the rope barriers with the shift supervisor and the plant superintendent.
- e. The inspector reviewed the switchgear room, air compressor area, and the auxiliary heating boiler area. The inspector observed the caution tags installed on the 1A-2A and 1B-2B bus tie breakers. The inspector also noted the caution signs on the air compressor area and the heating boiler area floor drains to be installed in accordance with previous commitments.^{32/}

32/CP to DL, ltr dtd 1/31/75.