

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

REGION III

Report No. 50-155/79-03

Docket No. 50-155

License No. DPR-6

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

Facility Name: Big Rock Point Nuclear Plant

Inspection At: Big Rock Point Site, Charlevoix, MI

Inspection Conducted: February 26-March 2, 1979

Inspector: *K. R. Ridgway*
K. R. Ridgway

3/15/79

Approved By: *RF Warnick*
R. F. Warnick, Chief
Reactor Projects Section 2

3/15/79

Inspection Summary

Inspection on February 26-March 2, 1979 (Report No. 50-155/79-03)
Areas Inspected: Routine, unannounced inspection of the licensee's Design Changes and Modification Program procedures and implementation; Refueling Surveillance; Operations Review; and followup actions relative to IF Bulletins, Licensee Event Reports, and open inspection items. The inspection involved 41 inspector-hours onsite by one NRC inspector.
Results: No items of noncompliance were identified in the seven areas inspected.

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DETAILS

1. Persons Contacted

- *C. J. Hartman, Plant Superintendent
- *D. E. DeMoor, Technical Engineer
- *R. E. Schrader, Technical Superintendent
- *J. A. Rang, Operations-Maintenance Superintendent
- *A. C. Sevensen, Operations Supervisor
 - J. J. Popa, Maintenance Engineer
- *C. F. Sonnenberg, Shift Supervisor
 - T. K. Pence, Shift Supervisor
 - F. J. Valade, Shift Supervisor
 - W. F. Blisset, Shift Supervisor
 - E. F. Peltier, Shift Supervisor
 - D. P. Blanchard, Reactor Engineer
 - L. F. Monshor Reactor Engineer
- *G. D. Gilbody, QA Engineer
- *R. W. Doan, Training Coordinator
 - J. A. Johnson, I&C Supervisor
 - D. Herboldsheimer, Maintenance Scheduler
- *K. M. Brun, Senior Secretary

The inspectors contacted several other licensee employees, including members of the technical, operations, and administrative groups.

*Denotes those attending the management exit interview on March 2, 1979.

2. General

The plant was shutdown on February 2, 1979, for a scheduled eight week refueling outage which also includes the installation of a modified Core Spray Sparger Ring and Steam Baffle. The shutdown was initiated one day early due to the failure of the Containment Ventilation Inlet Valves to pass a scheduled leak test.

The Core Spray Ring was found to be unacceptable when it arrived on site due to incomplete penetration of weld materials and misalignment of nozzles. The Complete Assembly has been shipped offsite for repairs. This is expected to extend the outage about three weeks.

3. Plant Operations

The inspector observed plant outage conditions, cobalt pin loading and shipping, control room manning, and equipment tagout status during a plant tour. Additionally, the following selected operating records were reviewed:

- a. Shift Supervisor Log (December 1978 to February 1979)
- b. Control Room Log (January 1979)
- c. Control Room Log Sheets (January 1979)
- d. Reactor Log Book (January 1979)
- e. Daily Order Book (Through January 1979)
- f. Switching Orders and Lock and Tag Control
- g. Deviation Reports (Through February 1979)

No noncompliance items were identified.

4. Design Changes and Modification

The inspector reviewed the licensees procedures for the control of design and modifications to determine that a system is in place to assure that:

- a. Responsibilities have been established in writing for the control of design changes, modifications, and the reporting of them to the NRC.
- b. The proper safety reviews in accordance with 10 CFR 50.59 and Technical Specifications are conducted, reviewed, approved and documented.
- c. Administrative controls are established for document control and records storage.
- d. Controls and responsibilities are established to effect changes in plant procedures, training programs, and design drawings.
- e. Quality requirements are specified in accordance with 10 CFR 50, Appendix B and the approved QA Program.

- f. Construction testing, preoperational testing and acceptance criteria have been identified and responsibilities for conducting and evaluating them assigned.
- g. Temporary modifications are reviewed and controlled.

During the course of the above review, the following procedures were examined:

h. Administrative Procedures

- (1) 1.9 Plant Modifications
- (2) 1.10 Plant Documents
- (3) 1.11 Plant Records Management
- (4) 1.15 Plant Reporting Requirements
- (5) 1.20 Special Site Testing

i. Engineering Manual Procedures

- (1) 16.2 Organization and Normal Engineering Duties
- (2) 16.5 Engineering Design Control, Minor Modifications
- (3) 16.6 Plant Engineering Interface - Major Modifications
- (4) 16.8 Use of Engineering Analysis Worksheet
- (5) 16.13 Preparation of Civil, Electrical and Mechanical Specifications
- (6) 16.17 Revisions to Plant Drawings

To ascertain if design changes and modifications were being carried out according to the above requirements, five Facility Changes (FC) were selected by the inspector for review. The FC's covered completed modifications in four different reactor systems:

Instrumentation
Emergency Core Cooling System
Containment
Plant and Electrical Power Systems

The FC's reviewed were:

- FC 425 Containment Vacuum Relief Modifications
- FC 442 Backup Station Battery Charger
- FC 452 Remove Steam Drum Level High Automatic Test Circuit
- FC 453 Instrument Current Trip Device in Vacuum Relief Circuitry
- FC 471 Containment Building Temperature Alarm

The review included the verification that two of the above FC's were installed as described.

No items of noncompliance were identified.

5. Surveillance - Refueling

The inspector reviewed two surveillance tests, TR-42, Emergency Diesel Generator Load and T7-01, Emergency Diesel Generator Automatic Start, required by Technical Specifications to verify that they were carried out with approved procedures and test results were evaluated and documented for record.

No items of noncompliance were identified.

6. Review of Licensee Event Reports (LER's)

The inspector reviewed the following LER's to verify they had been properly evaluated and corrective action identified:

(Closed) RO-78-45: Electrical splices inside containment were deemed to be marginal in moisture resistance.^{1/} The inspector reviewed the final report by Wyle Laboratory^{2/} on the qualifications of splices used. The test results along with the specifications of the tape used appeared to satisfactorily qualify the splices for LOCA conditions.

(Closed) RO-78-47 and 78-27: Control Rod Drive E-2 exceeded the Technical Specification limit of 350°F. The high temperature was caused by excessive drive coolant leakage caused by the failure of an "O-ring" seal. The licensee has contacted the vendor regarding this reoccurring problem and a solid BUNA-N "O-ring" and thicker spacer is being tested, thus far without problems.

(Closed) RO-78-48: Emergency Condenser Valve M07053 leakage required isolation of Loop No. 2. The valve disc was found to be slightly oversized and has been machined to fit properly.

No items of noncompliance were identified.

7. IE Bulletins

The inspector reviewed the following IE Bulletin to assure the licensee had reviewed and evaluated the request:

1/ IE Inspection Report No. 50-155/78-12.

2/ Wyle Laboratory Report, 58316, September 15, 1978.

IE Bulletin No. 78-14: Deterioration of BUNA-N Components in ASCO Solenoid Valves. The licensee has replaced BUNA-N parts in ASCO valves used in safety related systems and established a five year replacement frequency. (Closed)

8. Followup on Open Inspection Items (OII)

- a. (Closed) OII-248^{3/} Concerning the qualifications of individuals assigned to fire watches at the plant. The licensee has established fire prevention training in the training program which is required for all contractor and subcontractor personnel working onsite. The annual fire prevention retraining of onsite personnel appears to be adequate for fire watch responsibilities.
- b. (Closed) OII-249^{4/} Concerning old emergency procedures for fire fighting and the requirement for the Shift Supervisors to report to the scene of a fire. The licensee has recently issued a new manual of fire protection implementation. These new procedures require the Shift Supervisor to report to the Control Room, replacing one control operator and to direct necessary emergency actions from there.
- c. (Closed) OII-295^{5/} Concerning five open items from inspections conducted by the licensee's fire insurer, Nuclear Mutual Limited. The inspector reviewed a recent report, dated October 23, 1978, by M&M Protection Consultants, the insurer's inspector, that stated all open items had been resolved.
- d. (Closed) OII-300^{6/} Concerning the deactivation of the Reactor Depressurization System (RDS) Vitro Fault Detector System. The inspector reviewed the modification safety analysis and reviews of the Plant Review Committee and Safety and Audit Review Board. There are no further questions at this time.
- e. (Closed) OII-301^{7/} Concerning a faulty RDS uninterruptable power system circuit breaker. The faulty breaker had been replaced and no further problems with these breakers have arisen.
- f. (Closed) OII-319^{8/} Concerning the calibration of incore detectors without a written procedure. The inspector determined that Engineering Procedure 16.3.6, Reactor Engineering Activities Associated with a Flux Wire Run had been approved October 18, 1978 and Systems Operating Procedure 1 had been revised to include the above calibration.

3/ IE Inspection Reports No. 50-155/75-16, 76-21 and 77-11.

4/ Ibid.

5/ IE Inspection Report No. 50-155/76-21.

6/ Ibid.

7/ Ibid.

8/ IE Inspection Report No. 50-155/77-08.

- g. (Closed) OII-330^{9/} Concerning the training of personnel for the new Automatic Containment Vacuum Relief System modifications. The inspector determined that the required training had been completed and the new system included in the training program.
- h. (Closed) OII-333^{10/} Concerning a startup checklist for circuit breaker alignment. The inspector reviewed this item with the licensee who stated that some circuit breaker alignments are presently on existing checklists and a review of this matter did not indicate any other circuit breaker misalignment that would not be detected and corrected through other instrument or equipment checks.
- i. (Closed) OII-338^{11/} Concerning Control Rod B-2 drift problem. The B-2 drive mechanism had been removed, replaced with a spare, disassembled, examined and nothing unusual except some sticky black residue on the index tube (later analyzed and found to be graphite) was found. No further problems have been encountered.
- j. (Closed) OII-350^{12/} Concerning the Safety and Audit Review Board's composition, qualifications, review responsibilities, and implementation of them. A recent management inspection conducted by the NRC I&E Performance Appraisal Branch, November 27 through December 1, 1978 reviewed the SARB and indicated areas of concern which will be followed up in subsequent inspections carried under the Palisades Docket No. 50-255.^{13/14/15/}

The following OII's were reviewed but remain open.

- k. (Open) OII-336^{16/} Concerning the possibility of an inadequately addressed problem of a loss of coolant accident (LOCA) via the rupture of an Emergency Condenser tube. The concerns did not pertain to a LOCA but to the possibility of an unknown release to atmosphere through the Emergency Condenser vent. The release of radioactivity through the vent is guarded by redundant radiation detectors which have an alarm in the control room. These alarms may also be tripped if some of the Emergency Condenser tubes are exposed during a blowdown. This alarm might mask a tube rupture if it occurred coincidentally with the blowdown and this would be the most probable time for a rupture. This item will be held open for further review.

- 9/ IE Inspection Report No. 50-155/77-15.
- 10/ IE Inspection Report No. 50-155/78-06.
- 11/ IE Inspection Report No. 50-155/78-07.
- 12/ IE Inspection Report No. 50-155/78-12.
- 13/ IE Inspection Report No. 50-255/78-30.
- 14/ CP ltr to RIII dtd 2/15/79.
- 15/ IE RIII ltr to CP dtd 3/9/79.
- 16/ IE Inspection Report No. 50-155/78-06.

1. (Open) OII-310^{17/} Concerning addition of several alarms and other control circuitry to the Emergency Diesel Generator. The Facility Change covering these additions, FC-434, was still under review.
- m. (Open) OII-321^{18/} Concerning Quality Assurance Program Procedures, QAPP 5-51, Operations and, QAPP 5-1, Construction and Engineering not addressing the TS requirements for review of procedures. The licensee had not revised these procedures but stated this variance would be resolved.
- n. (Open) OII-340^{19/} Concerning replacement of faulty auxiliary switches in GE Model CR105X contactors. Parts are on order, and will be installed during the current outage.

No items of noncompliance were identified.

9. Exit Interview

The inspector met with the licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection. The inspector summarized the scope and results of the inspection.

The inspector commented on the difference in fire watch assignment responsibilities, and the use of Welding and Cutting Permits between onsite jobs through maintenance orders and contracted jobs by offsite people.

The licensee acknowledged the inspectors comments.

- 17/ IE Inspection Report No. 50-155/77-17.
18/ IE Inspection Report No. 50-155/77-11.
19/ IE Inspection Report No. 50-155/78-07.