

October 3, 2001

Mr. Kurt M. Haas
General Manager
Big Rock Point Nuclear Plant
Consumers Energy Company
10269 US 31 North
Charlevoix, MI 49720

SUBJECT: BIG ROCK POINT INSPECTION REPORT 05000155/2001-005(DNMS)

Dear Mr. Haas:

On September 13, 2001, the NRC completed an inspection at the Big Rock Point Nuclear Plant Restoration Project. The focus of the inspection activities was on decommissioning support activities and radiological safety. The enclosed report presents the results of these inspection activities.

Overall, reactor decommissioning activities were being performed satisfactorily. No violations of NRC requirements were identified.

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We will gladly discuss any questions you may have regarding this inspection.

Sincerely,

/RA/

Bruce L. Jorgensen, Chief
Decommissioning Branch

Docket No. 05000155
License No. DPR-6

Enclosure: Inspection Report 05000155/2001-005(DNMS)

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-155
License No:	DPR-06
Report No:	05000155/2001-005(DNMS)
Licensee:	Consumers Energy Company
Facility:	Big Rock Point Nuclear Plant
Location:	10269 U.S. 31 North Charlevoix, MI 49720
Dates:	September 10 -13, 2001
Inspectors:	William Snell, Health Physics Manager Mike LaFranzo, Radiation Specialist
Approved By:	Bruce L. Jorgensen, Chief Decommissioning Branch Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Big Rock Point Restoration Project NRC Inspection Report 05000155/2001-005(DNMS)

This routine decommissioning inspection covered decommissioning support and radiological safety. Overall, major decommissioning activities were properly monitored and controlled.

Decommissioning Support Activities

- The licensee was doing a good job maintaining the material condition of the plant. Spent Fuel Pool (SFP) instruments required by the Defueled Technical Specifications were being calibrated as required. (Section 1.1)

Radiological Safety

- No concerns were identified with the licensee's determination of new alarm set points for the SFP area radiation monitors (ARMs) due to the addition of heavy gauge box steel over the SFP. (Section 2.1)
- The licensee's solid radwaste and transportation programs were determined to have been functioning appropriately to ensure compliance with NRC and Department of Transportation (DOT) regulations. No radiation safety issues were identified which would compromise the licensee's program to maintain doses as-low-as-reasonably-achievable (ALARA) . (Section 2.2)

Report Details

1.0 Decommissioning Support Activities

1.1 Maintenance and Surveillance (62801)

a. Inspection Scope

The inspectors conducted a plant walkthrough inspection to assess the general material condition of the structures, systems and components associated with the safe storage of spent fuel, radiological effluent controls, and radiation protection. A review was also performed of the surveillance activities involving selected Defueled Technical Specification required equipment.

b. Observations and Findings

Based on a plant walkthrough inspection, the inspectors determined that the overall condition of the structures, systems and components associated with the safe storage of spent fuel, radiological effluent controls, and radiation protection were adequate. All fire extinguishers, radiological survey instruments and air monitors that were checked were observed to have current calibration stickers. Although several minor housekeeping issues were identified, the plant was generally clean with work areas well organized and uncluttered.

The inspectors reviewed the calibration records for the Spent Fuel Pool (SFP) area radiation monitors (ARMs), #RE-8286 and #RE-8287. These monitors were required by Defueled Technical Specification 3.1.1.d with the calibrations conducted per Procedure T30-07/RIP-15, *Calibration of Area Monitors*, Revision 23. The inspectors reviewed the results of ten out of twelve monthly calibrations conducted from October 2000 through September 2001. In all cases, the calibrations were observed to have been completed as required with no significant instrumentation problems noted. The inspectors also noted during the review that Step 5.1.1.b of Procedure T30-07/RIP-15 required that the set points on the ARMs be tested by positioning a calibration source close to the ARMs, and then verifying the high alarm sounded and the Containment ventilation valves closed. Based on a discussion with the licensee it was determined that the verification of the closure of the Containment ventilation valves was based on remote readout in the Monitoring Station. The inspectors asked if there was ever any verification of valve closure through a visual observation of the valves or through some other test such as flow indication. The licensee indicated that to the best of their knowledge this had not been done since the Monitoring Station had been completed in February 1999. However, the licensee did indicate that this same issue had been identified at a recent Safety Review Committee meeting (SRC Meeting 65-01, September 10, 2001) and that they were already reviewing the issue.

The inspectors conducted a review of the Work Order History for the calibration of the SFP level and temperature instrumentation required by Defueled Technical Specifications 3.1.1.a and b. These calibrations were required annually and were observed to have been successfully completed in January of 2000 and 2001. No concerns were noted in this area.

c. Conclusions

The licensee was doing a good job maintaining the material condition of the plant. Spent Fuel Pool instruments required by the Defueled Technical Specifications were being calibrated as required.

2.0 Radiological Safety

2.1 Occupational Radiation Exposure (83750)

a. Inspection Scope

The inspectors reviewed the licensee's calculation of new set points for SFP ARMs used to detect an accidental criticality.

b. Observations and Findings

To prevent any heavy objects from dropping into the SFP during modifications to the reactor building crane, the SFP was covered with heavy gauge box steel. This required the licensee to evaluate the impact of the additional shielding on the capability of the SFP ARMs to detect an accidental criticality. The inspectors reviewed the licensee's evaluation, including the Quality Review Form (Log #414-01), the 10 CFR 50.59 Evaluation, and the calculations of new alarm set points for the ARMs. As a result of the licensee's evaluations, the set points on the SFP ARMs were changed from 160 millirem per hour (mrem/hr) to 60 mrem/hr. No concerns were noted with the licensee's evaluation or calculations.

c. Conclusions

No concerns were identified with the licensee's determination of new alarm set points for the SFP ARMs due to the addition of heavy gauge box steel over the SFP.

2.2 Solid Radwaste & Transportation of Radioactive Materials (86750)

a. Inspection Scope

The inspectors performed a review of the licensee's solid radwaste and transportation policies and practices. The inspection was conducted through interviews, direct observations and documentation review.

b. Observations and Findings

The inspectors reviewed audits and evaluations of the licensee's program for CY 2000 and 2001. The inspectors noted that the auditors were properly characterizing issues that were identified and the corrective actions taken were appropriate for each issue.

Interviews with licensee personnel that dealt with the solid radwaste and transportation issues included managers and technicians. The inspectors noted that each individual had adequate knowledge to ensure that licensed material was properly stored and/or transported as required by NRC and Department of Transportation (DOT) regulations.

The inspectors observed licensed activities which included the transportation of a Surface Contaminated Objects (SCO) shipment, storage of licensed material and areas where licensed material is planned to be stored in the future. The inspector did not note any deficiencies in the program which would compromise radiation safety at the facility. In addition, the inspector took independent radiation measurements of the SCO shipment and radiation surveys around solid radwaste storage areas throughout the licensee's facility. No abnormal radiation levels were identified during the independent surveys.

Two sets of documents relating to shipments of licensed material were reviewed for compliance with NRC and DOT regulations and implementation of sound radiation safety practices. The two shipments were representative of typical shipments which occurred in CY 2001. The inspectors did not identify any issues which compromised regulatory requirements nor radiation safety.

c. Conclusions

The licensee's solid radwaste and transportation programs were determined to have been functioning appropriately to ensure compliance with NRC and DOT regulations. The inspectors identified no radiation safety issues which would compromise the licensee's ALARA program.

3.0 Inspector Follow-up Item (Emergency Drill Performance) (50-155/2001003-01)
CLOSED

On September 11, 2001, the inspectors observed the licensee perform an emergency response drill. The drill was conducted to provide additional training in response to weaknesses identified during a May 2001 emergency response drill.

The licensee's performance during the September 11 emergency drill was good. Overall command and control, assessment of plant conditions, offsite notifications, onsite accountability of personnel, radiological assessments, use of status boards, and use of procedures, were determined to be good. Weaknesses identified during the May 2001 drill in the areas of radiological dose to workers and use of respirators during emergency conditions were adequately demonstrated not to re-occur during the September 11 drill. This item is closed.

4.0 Exit Meeting

The inspectors presented initial inspection results to members of licensee management at the conclusion of the inspection on September 13, 2001. The licensee acknowledged the findings presented. The licensee did not identify any documents or processes reviewed by the inspectors as proprietary.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Bourassa, Licensing Supervisor
R. McCaleb, Nuclear Performance Assessment, Site Lead (NPAD)
K. Pallagi, Radiation Protection and Environmental Services Manager
W. Trubilowicz, Cost, Scheduling & Purchasing Manager
G. Withrow, Engineering, Operations & Licensing Manager
M. Ruhlman, Operations Manager
D. Cummin, Duratek Radwaste Supervisor

INSPECTION PROCEDURES USED

IP 62801	Maintenance & Surveillance
IP 83750	Occupational Radiation Exposure
IP 86750	Solid Radwaste & Transportation of Radioactive Materials

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-155/2001003-01	IFI	Evaluation of the radiological dose to workers and use of respirators during emergency response conditions. (Section 3.0)
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Discussed

None

LIST OF ACRONYMS USED

ALARA	As Low As Reasonably Achievable
ARM	Area Radiation Monitor
CR	Condition Report
CY	Calendar
DOT	Department of Transportation
IFI	Inspector Identified Item
NRC	Nuclear Regulatory Commission
RP	Radiation Protection Technicians
SCO	Surface Contaminated Objects
SFP	Spent Fuel Pool

PARTIAL LIST OF LICENSEE DOCUMENTS REVIEWED

Licensee documents reviewed and utilized during the course of this inspection are specifically identified in the "Report Details" above.