May 3, 2002

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 05000155/2002-002(DNMS)

Dear Mr. Haas:

On April 11, 2002, the NRC completed an inspection at the Big Rock Point Nuclear Plant Restoration Project. The focus of the inspection was on facilities management and control, spent fuel safety and radiological safety. The enclosed report presents the results of the inspection.

Overall, the reactor decommissioning activities inspected 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/

Christopher G. Miller
Decommissioning Branch

Docket No. 05000155
License No. DPR-6

Enclosure: Inspection Report 05000155/2002-002(DNMS)

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REGION III

Docket No.	05000155
License No.	DPR-06
Report No.	05000155/2002-002(DNMS)
Licensee:	Consumers Energy Company
Facility:	Big Rock Point Nuclear Plant
Location:	10269 U.S. 31 North Charlevoix, MI 49720
Dates:	March 19 - April 11, 2002
Inspectors:	William Snell, Health Physics Manager Ross Landsman, Project Engineer
Approved by:	Christopher G. Miller, Chief Decommissioning Branch Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Big Rock Point Restoration Project
NRC Inspection Report 05000155/2002-002(DNMS)

This routine decommissioning inspection covered facilities management and control, spent fuel safety and radiological safety. Overall, the decommissioning activities inspected were properly monitored and controlled.

Facilities Management and Control

- The Big Rock Point training program for Certified Fuel Handlers was consistent with, and being implemented in accordance with, requirements identified in the BRP Restoration Project Defueled Technical Specifications. Sufficient personnel were trained as Certified Fuel Handlers to effectively carry out fuel loading operations planned for 2002. However, if fuel loading activities should continue beyond the October through November 2002 time frame, the D25.1 and D25.2 Programs will have to be reissued and re-qualification training conducted. (Section 1.1)

- Self-assessments performed by the Radiation Protection and Environmental Services (RPES) Department covered a broad spectrum of topics, were thorough, and identified numerous issues where improvements could be made. Issues identified were being tracked and resolved, and corrective actions were observed to be adequate. (Section 1.2)

- The licensee's corrective action program for documenting issues and concerns for subsequent review and followup action was observed to be effectively implemented. (Section 1.3)

Spent Fuel Safety

- Licensee actions in response to issues discussed in Inspection Report 05000155/2002-001 appeared to eliminate the placement, lighting, vibrating, and form work problems in pouring the casks. (Section 2.1)

- Grouting control capabilities to achieve quality overpacks remains a challenge. (Section 2.2)

Radiological Safety

- Overall, the preplanning activities and the conduct of the Surge Tank clean out were well executed. No significant concerns were noted. (Section 3.1)

Report Details[1]

1.0 Facilities Management and Control

1.1 Organization, Management & Cost Controls (36801)

a. Inspection Scope

The inspector verified that the training program for certified fuel handlers was adequate, met the requirements of the Technical Specifications, and was being implemented as required.

b. Observations and Findings

Amendment 22 dated September 28, 2001, of the Big Rock Point (BRP) Restoration Project Defueled Technical Specifications stated that a Certified Fuel Handler was an individual qualified in accordance with BRP Program D25.1, "Certified Fuel Handler Initial Certification Program" (Section 1.2), that Shift Supervisor positions would be filled by a Certified Fuel Handler (Section 6.1.3), that Shift Supervisors shall report to an individual who is a Certified Fuel Handler (Section 6.2.2.g), and that a training program for the facility's Certified Fuel Handlers shall meet the requirements and recommendations of Section 5.5 of ANSI N18.1-1971. The inspector reviewed the licensee's training program for Certified Fuel Handlers to ensure that it met the requirements of ANSI N18.1-1971, and verified that personnel who were assigned as Shift Supervisors, supervisors of Shift Supervisors, and Certified Fuel Handlers, received the required training.

The inspector reviewed BRP Program D4.1, Nuclear Operator Training Program, Rev. 7, BRP Program D25.1, Certified Fuel Handler, Initial Certification Program, Rev. 5, and BRP Program D25.2, Certified Fuel Handler, Recertification Program, Rev. 2. The review determined that the training programs adequately implemented the requirements of Section 5.5 of ANSI N18.1-1971. Seventeen (17) personnel were identified as current in their training as Certified Fuel Handlers. As required, all Shift Supervisors (3) and the supervisor of the Shift Supervisors were among those 17 personnel. The inspector reviewed the completed sign-off sheets and written exams of seven of the personnel and verified that training had been completed, test questions were reasonably challenging, and test scores were meeting the required acceptance levels. No problems were identified with any of the documentation reviewed.

The inspector's review also identified that BRP Programs D25.1 and D25.2, had expired on March 15, 2002. If the licensee intends to, or has a need to, provide further training under these Programs, the programs will have to be reviewed and re-issued. The certifications for the 17 personnel who were current in their training as Certified Fuel Handlers at the time of the inspection, will expire during October or November 2002. If the licensee has completed all fuel movements by then, additional training should not be necessary.

[1]NOTE: A list of acronyms used in the report is included at the end of the Report Details.

c. Conclusions

The Big Rock Point training program for Certified Fuel Handlers was consistent with, and being implemented in accordance with, requirements identified in the BRP Restoration Project Defueled Technical Specifications. Sufficient personnel were trained as Certified Fuel Handlers to effectively carry out fuel loading operations planned for 2002. However, if fuel loading activities should continue beyond the October through November 2002 time frame, the D25.1 and D25.2 Programs will have to be reissued and re-qualification training conducted.

1.2 Self-Assessments (40801)

a. Inspection Scope

The licensee's self-assessments performed within the Radiation Protection and Environmental Services (RPES) Department were reviewed.

b. Observations

The inspectors conducted a 100 percent review of all self-assessments that had been performed by the RPES Department during calendar year 2002. A total of 43 assessments had been completed in the four areas of: Radwaste Oversight, Housekeeping, Radwaste Shipping, and Radiation Protection and Environmental Services. The assessments varied from being broad in scope and in-depth, to being very focused and short in duration. They covered a broad spectrum of topics, were of good technical quality, and identified numerous issues where improvements could be made. The licensee reviewed any findings as to level of significance to determine whether it would be followed up as an Departmental Open Item or written up as a Condition Report. The inspectors determined that findings were being assigned to an appropriate level for follow up, that items were being tracked and resolved, and that the corrective actions were adequate.

c. Conclusions

Self-assessments performed by the Radiation Protection and Environmental Services (RPES) Department covered a broad spectrum of topics, were thorough, and identified numerous issues where improvements could be made. Issues identified were being tracked and resolved, and corrective actions were observed to be adequate.

1.3 Corrective Actions (40801)

a. Inspection Scope

The licensee's process for assessing and following up on Condition Reports was reviewed.

b. Observations

The inspector reviewed numerous Condition Reports (CRs), attended several Corrective Action Review Boards (CARBs), and attended one Management Review Board (MRB). Condition Reports are routinely written by personnel working at Big Rock Point who

believe there is an item or concern that should be documented and tracked so that it receives additional review and possible follow-up corrective action. Each morning following the licensee's principal management meeting, the licensee conducts a CARB in which management reviews each of the CRs that were written since the previous CARB. The CR's are discussed with consideration given to whether the issue was properly characterized, what was or could be the potential safety significance, what are the proposed corrective actions, are the proposed actions adequate, and what level of follow-up, if any, was necessary. Issues that warrant additional management review are appropriately categorized and require subsequent review by the MRB to ensure the corrective actions were acceptable.

The inspectors' review of CRs indicated that they were being used by all the various groups onsite. It was clear from attending the CARBs and the MRB that management strongly encouraged the staff to use Condition Reports to identify issues. The CARB and MRB have been and continue to be a strength for BRP. Management did a good job of promptly evaluating issues to properly identify root causes and ensure corrective actions were going to be effective to prevent recurrence. In all cases observed by the inspector, CRs addressed during the CARBs and the MRB were thoroughly discussed and appropriately dispositioned.

c. Conclusions

The licensee's corrective action program for documenting issues and concerns for subsequent review and followup action was observed to be effectively implemented.

2.0 Spent Fuel Safety

2.1 Dry Cask Overpack Fabrication (60853)

a. Inspection Scope

This portion of the inspection was conducted at the Palisades site, where the concrete overpacks are being constructed. The inspectors evaluated the licensee's actions in response to the placement, lighting, vibrating, and form work issues discussed in NRC Inspection Report 05000155/2002-001.

b. Observations

Based upon suggestions from the licensee's new consultant, Construction Technology Laboratories, and after corrective actions were completed, the licensee lifted a previously placed hold on concrete placement. The inspectors observed concrete placements for the top section of Cask #5 and the middle section of Cask #6, with noticeable improvements in concrete placement techniques. The licensee installed proper lighting above the forms to enable viewing concrete flow and consolidation as placement progressed. The use of four vibrators ranging in head diameter from 1-1/4 inches to 2-1/4 inches assured good consolidation.

The licensee modified the bottom section base form work by adding air vents and modifying the tension sleeve blockouts. Examination of a previously poured bottom section revealed that adequate concrete flow has been achieved in the problem areas to

reduce and/or eliminate honeycomb, and the tension sleeve blockouts were removed without damaging and/or spalling the bottom concrete.

c. Conclusions

Licensee actions in response to issues discussed in Inspection Report 05000155/2002-001 appeared to eliminate the placement, lighting, vibrating, and form work problems in pouring the casks.

2.2 Overpack Segment Cask Grouting (60853)

a. Inspection Scope

The inspectors evaluated the grout injection process for the second and third casks.

b. Observations and Findings

The inspectors observed the grouting of three joints on the second and third cask overpacks. The workers demonstrated skilled practices and were very professional.

However, some leaks around the pressure bands occurred that the inspectors determined might have been minimized if lessons learned from previous grouting injections would have been used. Some of these leaks may have been minimized by:

- using only small ratchets when it was known that the large ratchets leaked;
- improving communication between the cask interior crew and the exterior crew as to when to reduce pumping pressure so as not to cause additional exterior band leaks when interior vents were being capped; and
- staggering the ratchets around the cask perimeter to reduce leakage.

In addition, not having someone with dedicated Quality Assurance (QA) and Quality Control (QC) production responsibility overseeing the work caused these personnel to get to involved with the production work at various times during the grouting, which compromised their ability to oversee the work well.

During discussions with inspectors, the licensee agreed to improve their record keeping while work was in progress to improve follow-up. The licensee also planned to bring back the original engineer who was more familiar with the grouting work, and planned to have separate QA and QC personnel performing their duties.

c. Conclusions

Grouting control capabilities to achieve quality overpacks remains a challenge.

3.0 Radiological Safety

3.1 Surge Tank Clean Out (83750)

a. Inspection Scope

The inspectors evaluated the pre-planning and conduct of cleaning out of the Surge Tank to reduce general area dose rates around the Spent Fuel Pool (SFP).

b. Observations

In preparation for moving fuel, the licensee determined that dose rates next to the SFP could potentially be lowered by power-washing and vacuuming the Surge Tank. The inspector attended the pre-job brief and IPTE (Infrequently Performed Test or Evolution) meeting prior to the work being performed. The licensee was approaching the work cautiously because of the potential for high dose rates to exist during the job. Water and sludge vacuumed from the Surge Tank would be sent through hoses to a High Integrity Container (HIC) where it would be dewatered.

The pre-job brief and IPTE were well attended and elicited numerous questions and suggestions. The discussion ranged in scope from safety concerns regarding working around three openings in the floor (each approximately 2 feet square) to the need to acquire good lighting for inside the tank. The licensee stressed the need for good communications to ensure that water levels were being controlled to avoid an inadvertent overfilling of the HIC, or the lowering of the water level to where the resins in the HIC would be uncovered. Good communications were essential because the pumps being used to pump the water from the Surge Tank to the HIC and from the HIC (after de-watering) to the Turbine Sump were being manually controlled.

The inspectors observed the initiation of the Surge Tank cleaning. The work areas were well controlled with appropriate postings and boundaries in place; dose rates were being continuously monitored; and workers were properly dressed out for the work being performed. No communications problems were observed between workers. The sludge and debris were less than expected which kept dose rates less then what could have occurred. The inspectors identified a potential safety hazard during the vacuuming that could have been avoided. Because the upper end of the vacuum pole was fairly high, as it was moved around by a worker it would occasionally hit a fire hose that was draped over head. This would cause the worker to look up and away from the open hole he was working around. The inspectors did not identify any worker injuries from the process.

c. Conclusions

Overall, the preplanning activities and the conduct of the Surge Tank clean out were well executed. No significant concerns were noted.

4.0 Exit Meeting

The inspectors presented initial inspection results to members of licensee management at the conclusion of the inspection on April 11, 2002. 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

K. Haas, Plant General Manager
G. Drenth, Training Supervisor
K. Pallagi, Radiation Protection & Environmental Services Manager
G. Petitjean, Licensing Supervisor
W. Trubilowicz, Dry Fuel Storage Manager
G. Withrow, Engineering, Operations & Licensing Manager

INSPECTION PROCEDURES USED

IP 36801	Organization, Management & Cost Controls
IP 40801	Self Assessment, Auditing, and Corrective Action
IP 60853	On-Site Fabrication and Construction of an ISFSI
IP 83750	Occupational Radiation Exposure

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened	None
Closed	None
Discussed	None

LIST OF ACRONYMS USED

BRP	Big Rock Point
CARB	Corrective Action Review Board
CR	Condition Report
HIC	High Integrity Container
IPTE	Infrequently Performed Test or Evolution
MRB	Management Review Board
NRC	Nuclear Regulatory Commission
QA	Quality Assurance
QC	Quality Control
RPES	Radiation Protection and Environmental Services
SFP	Spent Fuel Pool

LICENSEE DOCUMENTS REVIEWED

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