July 16, 2003

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 05000155/2003-003(DNMS)

Dear Mr. Haas:

On June 19, 2003, the NRC completed an inspection at the Big Rock Point Nuclear Plant. The purpose of the inspection was to determine whether decommissioning activities were conducted safely and in accordance with NRC requirements. Specifically, the inspectors evaluated decommissioning support activities and radiological safety. At the conclusion of on-site inspections on May 30 and June 19, 2003, the inspectors discussed the inspection findings with you and members of your staff.

This inspection consisted of an examination of decommissioning activities at the Big Rock Point Nuclear Plant as they relate to safety and compliance with the Commission's rules and regulations. Areas examined during the inspection are identified in the enclosed report. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities in progress, and interviews with personnel.

Based on the results of this inspection, the NRC did not identify any violations. The decommissioning activities reviewed were being conducted in accordance with applicable regulations and license conditions.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

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

Sincerely,

/RA/

Christopher G. Miller, Chief
Decommissioning Branch

Docket No. 05000155
License No. DPR-6

Enclosure: Inspection Report 05000155/2003-003(DNMS)

See Attached Distribution

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.	05000155
License No.	DPR-06
Report No.	05000155/2003-003(DNMS)
Licensee:	Consumers Energy Company
Facility:	Big Rock Point Nuclear Plant
Location:	10269 U.S. 31 North Charlevoix, MI 49720
Dates:	May 27 - June 19, 2003
Inspector:	William Snell, Health Physics Manager Gene Bonano, Radiation Protection Specialist
Approved by:	Christopher G. Miller, Chief Decommissioning Branch Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Big Rock Point Restoration Project
NRC Inspection Report 05000155/2003-003(DNMS)

This routine decommissioning inspection involved review of the licensee's performance related to decommissioning support activities and radiological safety. During this inspection period, major activities included cleaning and draining the spent fuel pool (SFP) and preparations for removal of the reactor vessel and steam drum. Overall, the licensee's major decommissioning activities were properly monitored and controlled.

Decommissioning Support Activities

- The inspectors determined that the licensee conducted decommissioning activities in accordance with license requirements and in a safe manner. Licensee personnel were knowledgeable of the radiological conditions in their work areas. Workers demonstrated effective communications and work practices. Radiation workers wore dosimetry as required. Workers were attentive to industrial safety requirements. The material condition of facilities and equipment was acceptable. Housekeeping was adequate. (Section 1.1)

Radiological Safety

- The licensee's implementation of its radioactive waste program was adequate. Radioactive waste being transported for disposal met applicable regulatory requirements. The licensee maintained adequate controls for the storage of solid low level radioactive waste (LLRW). (Section 2.1)

- The licensee's staff demonstrated an appropriate knowledge of and compliance with procedures associated with the identification of damaged electronic dosimetry. (Section 2.2)

- Licensee personnel were effectively using Radiation Work Permits (RWP) to control work activities and to maintain doses as-low-as-reasonably-achievable (ALARA). (Section 2.3)

Report Details[1]

1.0 Decommissioning Support Activities

1.1 Status of Decommissioning (71801)

a. Inspection Scope

The inspectors evaluated decommissioning activities to verify that the licensee was conducting work in accordance with licensed requirements and in a safe manner.

b. Observations and Findings

The inspectors conducted numerous site tours to observe licensee staff conducting decommissioning activities, including vacuuming and cleaning of the Spent Fuel Pool (SFP), cutting and re-threading of reactor head stud bolts, moving material with the overhead crane, and the performance of radiological surveys. For work activities observed, the inspectors determined that the licensee staff were attentive to their individual tasks as well as cognizant of the overall work activity. The inspectors found the licensee staff to be knowledgeable of the radiological conditions in their work area and aware of what actions could cause the radiation levels to change. Workers communicated effectively, with repeat-backs used when appropriate. Workers demonstrated appropriate concern for industrial safety.

The inspectors observed that licensee staff were wearing appropriate anti-contamination clothing and dosimetry, as specified in the governing Radiation Work Permits (RWP). Workers followed proper technique when removing anti-contamination clothing.

The inspectors noted that the material condition of facilities and equipment was acceptable. In general, housekeeping was adequate.

c. Conclusion

The inspectors determined that the licensee conducted decommissioning activities in accordance with license requirements and in a safe manner. Licensee personnel were knowledgeable of the radiological conditions in their work areas. Workers demonstrated effective communications and work practices. Radiation workers wore dosimetry as required. Workers were attentive to industrial safety requirements. The material condition of facilities and equipment was acceptable. Housekeeping was adequate.

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

2.0 Radiological Safety

2.1 Solid Radioactive Waste Management and Transportation of Radioactive Materials (86750)

a. Inspection Scope

The inspectors reviewed shipping documents, observed work activities, evaluated compliance with the regulations, and interviewed staff regarding the implementation of the radioactive waste program.

b. Observations and Findings

The inspectors toured the area where the licensee stages radioactive waste for shipment and disposal. Four trucks were prepared to leave with shipments of radioactive waste. One shipment contained the reactor pressure vessel (RPV) head (shipment number S-2206). The other shipments contained non-hazardous waste (shipment numbers C-03-005, C-03-008, and C-03-009). The inspectors conducted radiological surveys of the packaged RPV head. Survey instrument readings indicated the shipment was in compliance with NRC and Department of Transportation (DOT) transportation regulations. Marking, labeling, and placarding were appropriate for the shipments. The inspectors reviewed the shipping documents for the shipments and found the licensee's documents acceptable.

The inspectors also observed activities and reviewed transportation documents associated with a shipment of radioactive waste to GTS Duretek in Tennessee. The shipment contained a spent fuel rack in a sea-land container and contaminated concrete debris in three B25 boxes. The inspectors reviewed all shipping documents and survey data from the four containers and the truck, and determined the documentation was appropriately completed. The licensee informed the driver of who was to be notified in the event of an incident, and the driver signed to indicate he had examined the truck and containers prior to departure and that everything was found to be acceptable.

The inspectors observed the licensee's bulk monitoring system while it counted a roll-off container of waste. No concerns were identified. The licensee had adequate controls for the storage, processing, and shipment of its solid low level radioactive waste (LLRW).

c. Conclusions

The licensee's implementation of its radioactive waste program was adequate. Radioactive waste being transported for disposal met applicable regulatory requirements. The licensee maintained adequate controls for the storage of solid low level radioactive waste (LLRW).

2.2 Personnel Dosimetry Program/Electronic Dosimetry (83750)

a. Inspection Scope

The inspectors evaluated the licensee's actions regarding damaged electronic dosimetry.

b. Observations and Findings

The inspectors reviewed Procedure RP-31, Revision 52, "Personnel Dosimetry," and interviewed licensee staff regarding their implementation of the personnel dosimetry procedures relative to damaged dosimetry. The use of secondary dosimetry such as electronic dosimeters (ED) was required by the Administrative Procedure D5.7 and Procedure RP-31. Procedure RP-31 required licensee staff to use Form RP-31-6, "Secondary Dose Assessment Record," to document the accuracy and operability of EDs that were damaged and/or suspected of containing incorrect dose information. In addition, the procedure required the staff to document in a condition report when secondary dosimetry was not worn. A condition report was also required when an ED indicated "Out" at the radiological Access Control Point (ACP), and it did not record the worker's dose in the dosimeter's histogram or on the SAIC (Science Applications International Corporation) Access Control System (SACS).

The inspector reviewed a completed Form RP-31-6 to verify that the licensee was complying with the procedure for damaged EDs. No concerns were identified. No cases were identified where EDs were damaged in the field that resulted in a loss of dose information. As a result, no condition reports were required to be written. In all cases of damaged EDs, the data were retrieved, verified, and the dosimetry data base updated. The inspectors determined that the licensee's use and management of secondary dosimetry was acceptable.

c. Conclusions

The licensee's staff demonstrated an appropriate knowledge of and compliance with procedures associated with the identification of damaged electronic dosimetry.

2.3 Radiation Work Permits (83750)

a. Inspection Scope

The inspectors evaluated a selection of Radiation Work Permits (RWP) for adequacy and proper implementation.

b. Observations and Findings

The inspectors obtained a list of the RWPs which licensee personnel used to perform work on June 16, 2003. Each of these RWPs was reviewed to verify that they were properly filled out, that the provisions of the RWP were appropriate to the work, and that the RWP contained the appropriate approval signatures. The inspectors reviewed the licensee's As-Low-As-Reasonably-Achievable (ALARA) review documents for five RWPs to ensure the RWPs were consistent with the review. In all cases, the inspectors determined the RWPs were consistent with the ALARA reviews, were appropriate for the radiological work conditions, and were properly completed.

The licensee required that all workers attend a daily pre-job brief prior to using a job-specific RWP. The inspectors obtained copies of the Standard Radiation Work Permit Pre-Job Briefing Sheets for each of the RWPs under which work was performed on

June 16, 2003, and compared these sign-in sheets to computer printouts of the RWP Entry Logs. In all cases, the workers who had signed in on the RWPs attended the pre-job briefs.

The following seven RWPs and associated ALARA documents were reviewed:

1) RWP B030246, “Radwaste Activities - Liner/Cask/HIC/LHRA,” Revision 1 dated May 19, 2003
ALARA Review No. 162
RWP Bump Ticket, dated June 17, 2003

2) RWP B033054, “Decommission the Regen & Non-Regen Heat Exchanger Room #439," Revision 1 dated May 21, 2003
ALARA Review No. 174
In-Progress ALARA Job Review, dated June 16, 2003
Shielding/Source Term Reduction Analysis Sheet, dated April 11, 2003

3) RWP B033039, “Remove Reactor Vessel & Prepare for Shipping," Revision 0
ALARA Review No. 168
Reactor Vessel Removal ALARA Plan
Shielding/Source Term Reduction Analysis Sheet, dated May 21, 2003

4) RWP B030216, “Decommission Activities in High Radiation Areas and Areas >50K Smearable"

5) RWP B030283, “Locked High Radiation Area Entries," Revision 3 dated January 23, 2003
ALARA Review No. 163

6) RWP B033070, “SFP Clean Out Surveys/Research, Floor and Wall Decon/Vacuum, and Plate Removal," Revision 2 dated April 30, 2003

7) RWP B033039, “Remove and Prepare Reactor Vessel for Shipment - Recirc Pump Room," Revision 1 dated April 16, 2003
In-Progress ALARA Review, dated June 4, 2002

c. Conclusion

Licensee personnel were effectively using Radiation Work Permits (RWP) to control work activities and to maintain doses as-low-as-reasonably-achievable (ALARA).

3.0 Exit Meetings

The inspectors presented preliminary inspection results to members of licensee management at the conclusion of onsite inspections on May 30, 2003, and June 19, 2003. 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
K. Pallagi, Radiation Protection & Environmental Services Manager
W. Trubilowicz, Dry Fuel Storage Manager
G. Withrow, Engineering, Operations & Licensing Manager

INSPECTION PROCEDURES USED

IP 71801	Decommissioning Performance and Status Review
IP 83750	Occupational Radiation Exposure
IP 86750	Solid Radioactive Waste Management and Transportation

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened	None
Closed	None
Discussed	None

LICENSEE DOCUMENTS REVIEWED

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

LIST OF ACRONYMS USED

ACP	Access Control Point
ADAMS	Agency-wide Documents and Management System
ALARA	As-Low-As-Reasonably-Achievable
BRP	Big Rock Point
DNMS	Division of Nuclear Materials Safety
DOT	Department of Transportation
ED	Electronic Dosimeter
LLRW	Low-Level Radioactive Waste
mCi	milliCurie
NRC	Nuclear Regulatory Commission
RP	Radiation Protection
RPV	Reactor Pressure Vessel
RWP	Radiation Work Permit
SACS	SAIC Access Control System
SAIC	Science Applications International Corporation
SFP	Spent Fuel Pool