January 9, 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 07200043/2002-002(DNMS)

Dear Mr. Haas:

On December 13, 2002, the NRC completed an inspection at the Big Rock Point Nuclear Plant Restoration Project related to the loading of the first two dry fuel storage casks and their transfer to the Independent Spent Fuel Storage Installation. The enclosed report presents the inspection findings, which were discussed on December 13, 2002, with members of your staff.

This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Although there were some unexpected abnormalities that occurred during the loading of the first cask, the cask team was able to resolve them successfully. The licensee accomplished the loading of the second cask with less difficulty. No violations of NRC requirements were identified.

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
Decommissioning Branch

Docket No. 07200043

Enclosure: Inspection Report 07200043/2002-002(DNMS)

See Attached Distribution

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.	07200043
Report No.	07200043/2002-002(DNMS)
Licensee:	Consumers Energy Company
Facility:	Big Rock Point Nuclear Plant
Location:	10269 U.S. 31 North Charlevoix, MI 49720
Dates:	November 4, 2002 - December 13, 2002
Inspector:	Ross B. 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 07200043/2002-002(DNMS)

This inspection included direct observation of the loading and transfer of the first two spent fuel storage casks. During the first cask loading, some unexpected complications occurred, but the licensee conducted investigations resulting in technically sound solutions, and safely finished the loading of spent fuel and its transfer to the Independent Spent Fuel Storage Installation (ISFSI).

Report Details[1]

1.0 Operation of an Independent Spent Fuel Storage Installation (ISFSI) (60855)

a. Inspection Scope

The inspector observed various portions of the loading of the first two casks to verify compliance with the Certificate of Compliance (C of C), the Safety Analysis Report, Technical Specifications, licensee loading procedures, and 10 CFR Part 72 requirements.

b. Observations

Observations of the loadings of the two casks were focused on activities in progress which were well controlled and successfully completed. A number of minor problems occurred, primarily in the loading of the first cask, and these problems are addressed in the following sections of the inspection report.

Damaged Fuel Can Lid

After loading fuel bundles into the lower basket of the first cask, difficulty was encountered with placing two fuel lids on two out of the four fuel cans designed for damaged fuel. The licensee determined that two damaged fuel cans had type F series fuel assemblies which have orientation tabs on the side of the bale handles instead of on the ends, as all the other types of damaged fuel cans have. The two cans would not fit into the lid as fabricated.

Immediate corrective action was to remove the F series bundles and replace them with damaged series bundles of other series design. The licensee had enough bundles of other series to complete the first two casks without modifying the lids or bales.

The licensee decided to modify the lid to accommodate the F series orientation tabs. Licensee staff performed an evaluation based on 10 CFR Part 72.48 to determine whether the proposed modification to the lid affected the confinement boundary of the damaged fuel can. The evaluation report indicated that the modification didn't affect the confinement boundary. The licensee determined that an amendment to the safety analysis report will be required.

The licensee determined that one potential cause of the problem was that the licensee did not send the appropriate fuel vendor drawings to the contractor when the contractor was designing the lids.

Improper Lighting

During the final video verification of fuel assemblies in the lower basket of the first cask, the licensee determined that one fuel bundle was seated too high to allow the upper basket to seat properly on the lower basket. Investigation revealed that the fuel bundle was "hung up" on the upper tie plate. Re-lifting the bundle and re-seating it solved the

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

immediate problem. The root cause was determined to be that the previous shift crew did not have enough light shining into the bottom of the cask to see properly. This was fixed prior to loading the second cask load by adding more light.

Crane Trip

While lifting the first loaded cask out of the spent fuel pool, the crane emergency brake engaged right after the cask cleared the surface of the spent fuel pool. The licensee determined that the crane operator increased the hoist speed to high, from slow, as soon as the cask cleared the surface. After accelerating to approximately half hoist speed, the emergency brake tripped to the engaged position.

The licensee determined that the cause of the "trip" was the emergency absorbing torque limiter (EATL) slipping during hoist acceleration from slow speed to high. The EATL was conservatively reset after the 137.5 ton load test in October for maximum cask weight without taking into account the inertia from accelerating from slow speed to high speed. Since being reset, no heavy load had been lifted by the crane until the lift for loading the first cask. After inspection of all drive train components revealed no abnormal condition, and because the cask was hanging over the pool, upper management allowed the brake to be reset. The cask was moved at slow speed to the cask stand in Room 444 without further incident. The EATL was then readjusted to the upper end of the tolerance band to allow for load hoist acceleration torque. The licensee encountered no trouble with lifting the second cask out of the pool.

Vertical Canister Lift Fixture

During preparation to lower the canister from the transfer cask to the storage cask, the vertical canister lift fixture (VCLF) failed to operate properly. The evolution was stopped, and a manufacturer representative came to the site. Troubleshooting revealed that there was a lack of lubrication in the air hoist motor shuttle valves, causing the valves to stick in the open position. The oiler adjustment was closed because the licensee was unaware that the valves needed to be oiled. The valves were replaced, and the oiler was set at four drops per minute according to the valve manufacturer's recommendation. The cask was successfully lowered into the storage cask.

This event is similar to the instance of un-lubricated cask vent and drain ports discussed in the previous report, 07200043/2002-001, where the individual maintenance requirements of smaller parts were not transferred to the maintenance instructions of the bigger assembly. The licensee was attempting to determine whether any other cask equipment sub-parts require additional maintenance instructions at the end of the inspection period.

Broken Leak Rate Fitting

During the initial test of the second canister vent valve leak rate, an acceptable vacuum could not be achieved. The fitting threaded into the vent valve body was then tightened further which resulted in breaking the coupling between the fitting and the leak rate detector adapter fitting. The licensee machined a part to remove the broken nipple and welded a new pipe coupling onto the fitting. A satisfactory leak test was then performed. The valve port cover was then welded on. The licensee was considering the use of a stronger fitting or adapter on the remaining casks to remedy this concern.

c. Conclusions

The loading demonstrated the cask team's thorough understanding of the NRC's requirements and licensee procedures. Good safety and radiation protection practices were reinforced by the team. Management involvement was evident throughout the evolutions. A number of unanticipated problems occurred which were quickly brought to the attention of management, and good investigative effort resulted in technically sound solutions.

2.0 Exit Meeting

The inspectors presented inspection results to members of licensee management at the conclusion of the inspection on December 13, 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
W. Trubilowicz, Dry Fuel Storage Manager
G. Withrow, Engineering, Operations & Licensing Manager
P. Donnelly, Readiness Review Manager

INSPECTION PROCEDURES USED

IP 60855	Operation of an ISFSI

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

C of C	Certificate of Compliance
EATL	Emergency Absorbing Torque Limiter
ISFSI	Independent Spent Fuel Storage Installation
SFP	Spent Fuel Pool
VCLF	Vertical Canister Lift Fixture

LICENSEE DOCUMENTS REVIEWED

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