



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

September 22, 2006

Docket No. 05000320

License No. DPR-73

Mr. Gary Leidich  
President & Chief Nuclear Officer  
GPU Nuclear Inc.  
176 South Main Street  
Mail Code A-G0-19  
Akron, Ohio 44308

SUBJECT: INSPECTION 05000320/2006011, GPU NUCLEAR, THREE MILE ISLAND  
UNIT 2, MIDDLETOWN, PENNSYLVANIA

Dear Mr. Leidich:

The NRC has completed an announced inspection at your Middletown, PA facility, which covered an inspection period that began on May 31, 2006, and concluded on August 07, 2006. The findings of the inspection were discussed with Mr. James Byrne and other members of your staff upon the conclusion of the site inspection on June 1, 2006. Additional information provided on July 5, 2006 was reviewed, and a summary of the inspection findings for the entire inspection period was discussed with Mr. Byrne and other members of your staff during a telephone conversation on August 31, 2006. The enclosed report presents the results of that inspection.

Your programs for Post-Defueling Monitored Storage, corrective actions, occupational exposure controls, radiological environmental monitoring, and radioactive effluent controls were inspected during this inspection period. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations made by the inspector. The programs related to the Unit 2 Technical Specifications were appropriately implemented. Within the scope of this inspection, no violations were identified.

In accordance with Section 2.390 of the NRC's "Rules and Practices," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosure will be placed in the NRC Public Document Room (PDR) and will be accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html>. No response to this letter is required.

Sincerely,

*/RA/*

Marie Miller, Chief  
Decommissioning Branch  
Division of Nuclear Materials Safety

G. Leidich  
GPU Nuclear

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Enclosure:  
NRC Region I Inspection Report No. 05000320/2006011

cc:

J. Rinckel, Vice President, GPU Nuclear Oversight  
R. West, Vice President, Three Mile Island Unit 1 (TMI-1)  
T. Nahay, Director Work Management, TMI-1  
D. Smith, PDMS Manager, Work Management, TMI-1  
L. Weir, TMI Nuclear Oversight Manager (TMI-2 matters)  
C. Smith, Manager, Regulatory Assurance, TMI-1  
A. Miller, Senior Regulatory Specialist, Regulatory Assurance, TMI-1  
D. Petro, Responsible Engineer, TMI-2  
E. Anderson, Responsible Engineer, TMI-2  
Commonwealth of Pennsylvania

G. Leidich  
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U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Inspection No. 05000320/2006011  
Docket No. 05000320  
License No. DPR-73  
Licensee: Three Mile Island Station, Unit 2 (TMI-2)  
Location: P.O. Box 480  
Middletown, Pennsylvania 17057-0191  
Inspection Dates: May 31 - June 1, 2006  
Date Followup  
Information Received: July 5, 2006  
Inspector: Laurie A. Kauffman, Health Physicist  
Decommissioning Branch (DB)  
Division of Nuclear Materials Safety (DNMS)  
Approved By: Marie Miller, Chief  
DB, DNMS

## **EXECUTIVE SUMMARY**

Three Mile Island Station, Unit 2 (TMI-2)  
NRC Inspection Report No. 05000320/2006011

The Three Mile Island Nuclear Station, Unit 2 (TMI-2) has been permanently shutdown since March 1979 and has been in Post-Defueling Monitored Storage (PDMS) since December 1993. Final decommissioning will not be scheduled until after 2014, which is the tentative permanent shutdown date for Three Mile Island, Unit 1.

This routine inspection included a review of PDMS activities related to the safe storage of radioactive material and the implementation of the Unit 2 Technical Specifications (TS). The inspection focused on implementation of the TS requirement to perform an annual surveillance of the exclusion area barriers and accessible areas within the exclusion areas.

### **Organization and Management Controls**

The licensee's organization and management was adequate to support oversight of PDMS activities. The licensee maintained an adequate corrective action program to identify and resolve issues.

### **Plant Support**

Based on the above observations and document reviews, implementation and oversight of PDMS was effective for the storage of radioactive material. The licensee effectively implemented and maintained the radioactive effluent controls program, radiological environmental monitoring program, and the radiation protection program.

## REPORT DETAILS

### **1.0. Organization and Management Controls**

a. Inspection Scope (Inspection Procedures (IPs) 36801, 37801, 40801, 71801)

The inspector reviewed the Post-Defueling Monitored Storage (PDMS) program. Specifically, the inspector evaluated the recent decommissioning organization changes to determine the effectiveness of the Three Mile Island, Unit 2 (TMI-2) management oversight of PDMS activities. The inspector reviewed the Biennial 10 CFR 50.59 Report, dated February 16, 2006, and aspects of the safety review program for the years 2004 and 2005 to verify implementation of TMI-2 TS 6.8.1.4 and 10 CFR 50.59 requirements. The inspector also evaluated the TMI-2 corrective action program to determine the licensee's ability to identify, resolve, and prevent recurrence of conditions and issues that degrade safety or the quality of PDMS activities. The evaluation was conducted through interviews with cognizant personnel and a review of selected Issue Reports (IRs) and Action Reports (ARs) based on the nature of the issue and the licensee's ability to correctly characterize, disposition, and complete corrective actions.

b. Observations and Findings

No findings of significance were identified.

No significant organizational changes had been implemented since the previous inspection. However, the organization was in transition regarding the position of Director, TMI-2. The effectiveness of this change will be reviewed during the next inspection. The licensee had not conducted facility modifications that require a written safety evaluation and therefore, had not generated any 10 CFR 50.59 Safety Evaluation reports during the years 2004 and 2005. Regarding the IRs and ARs reviewed, the inspector determined that the licensee identified, dispositioned, and corrected the issues in a timely manner.

c. Conclusion

The licensee's organization and management was adequate to support oversight of PDMS activities. The licensee maintained an adequate corrective action program to identify and resolve issues.

### **2.0 Plant Support**

a. Inspection Scope (IPs 83750, 84750)

The inspector reviewed PDMS activities related to the safe storage of radioactive material and the implementation of primary containment isolation requirements, TS 3/4.1. The inspection included site tours and observations of the licensee's annual reactor building entry surveillance test. The inspector evaluated aspects of the

occupational radiation protection program, radioactive effluent monitoring program, and the radiological environmental monitoring program. The inspector reviewed the related implementing procedures and associated surveillance test results. The inspector also reviewed the 2005 Radiological Environmental Monitoring Program Report, dated April 26, 2006, the Combined 2005 Annual Radioactive Effluent Release Report, dated April 26, 2006, the TMI-2 vent sampling procedures, the TMI-2 sump release permit procedures, and the supporting radioactive liquid and radioactive gaseous effluent release permits and data, from January 2005 through May 2006.

b. Observations and Findings

No findings of significance were identified.

The inspector observed the licensee implement the annual reactor entry surveillance test requirements. The inspector noted that the team was prepared for the surveillance test. The pre-job briefing was detailed and described the scope of work, including radiological and industrial safety, human performance, and confined space precautions. The team performed visual inspections for structural integrity and material condition of components, water intrusion, and lock integrity. The team performed and verified radiation level and airborne activity surveys, radiological surveys and wipes, and analysis of the surveys and wipes. The results of the surveys indicated that water intrusion limits were met, the liquid and gaseous effluent limits were met, and radiological conditions in the facility were stable. The licensee's As Low As Reasonably Achievable (ALARA) report contained a summary of the estimated doses, a comparison of the estimated doses to the actual doses, and a detailed evaluation of the entry. The licensee accurately analyzed and explained the actual total dose. No individuals exceeded the dose and dose rate set-points, and the licensee met the intent of ALARA requirements.

The inspector also verified that the licensee documented the results of the annual surveillance tests and the effluent monitoring program in the appropriate annual reports. The inspector also reviewed aspects of the licensee's Radiological Environmental Monitoring Program (REMP) and verified that the licensee collected and analyzed the samples within the required frequencies, sample collection was conducted in accordance with the REMP procedures, and the analytical results met the lower limits of detection.

c. Conclusions

Based on the above observations and document reviews, implementation and oversight of PDMS was effective for the storage of radioactive material. The licensee effectively implemented and maintained the radioactive effluent controls program, REMP, and the radiation protection program.

## **I. Exit Meeting**

The inspector presented the inspection results to representatives of the licensee's staff at the conclusion of the onsite inspection on June 1, 2006. Additional information provided on July 5, 2006 was reviewed, and a summary of the inspection findings for the entire inspection period was discussed during a telephone conversation on August 31, 2006. Licensee representatives acknowledged the inspection findings. Although proprietary items were reviewed during the inspection, no proprietary information is presented in this report.

**PARTIAL LIST OF PERSONS CONTACTED**

Licensee

- E. Anderson, Responsible Engineer, TMI-2; Fleet Radiation Protection Manager, First Energy Nuclear Operating Company (FENOC)
- J. Bowers, Radiation Protection Engineer, ALARA Analyst
- \*J. Byrne, Director, TMI-2
- R. Crawford, Radiation Waste Operator
- \*E. A. Curry, Supervisor, TMI-2
- D. Divittore, Radiation Protection Engineer - ALARA Analyst
- K. Mateer, Senior Mechanical Maintenance Technician
- D. Pace, FENOC Vice President
- E. Parido, Radiation Protection Technician, TMI-1
- \*D. Petro, Responsible Engineer, TMI-2; Senior Consultant, FENOC
- \*D. Smith, PDMS Manager, Work Management, TMI-1
- L. Weber, Environmental Chemist, TMI-1
- G. Welsh, Senior Mechanical Maintenance Technician

\* Denotes individuals present during the exit meeting held on August 31, 2006

**INSPECTION PROCEDURES USED**

- 36801 Organization, Management, and Cost Controls
- 37801 Safety Reviews, Design Changes, and Modifications
- 40801 Self-Assessment, auditing and Corrective Action
- 71801 Decommissioning Performance and Status Reviews
- 83750 Occupational Radiation Exposure
- 84750 Radioactive Waste Treatment, and Effluent and Environmental Monitoring

**ITEMS OPEN, CLOSED, AND DISCUSSED**

OPEN NONE

CLOSED NONE

DISCUSSED NONE

**LIST OF ACRONYMS USED**

ALARA	As Low As Reasonably Achievable
AR	Action Report
FENOC	First Energy Nuclear Operating Company
IP	Inspection Procedure
IR	Issue Report
PDMS	Post-Defueling Monitored Storage
REMP	Radiological Environmental Monitoring Program
TMI-2	Three Mile Island Nuclear Station, Unit 2
TS	Technical Specifications