



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

June 2, 2015

Docket No. 05000320

License No. DPR-73

Paul A. Harden
President
GPU Nuclear, Inc.
FirstEnergy Corporation
Mail Stop: A-WAC-A3
341 White Pond Drive
Akron, OH 44320

SUBJECT: GPU NUCLEAR, INC., THREE MILE ISLAND STATION, UNIT 2 – NRC
INSPECTION REPORT 05000320/2015008

Dear Mr. Harden:

On May 11-13, 2015, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Three Mile Island Station Unit 2 (TMI-2). The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and the conditions of your license. The inspection consisted of observations by the inspector, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with Michael Casey (GPU Nuclear Inc.), Trevor Orth (Exelon Generating Company), and other members of the Exelon Generating Company management and staff on May 14, 2015, at the conclusion of the inspection and are described in the enclosed report. No findings of safety significance were identified.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Med, Ind, & Academic Uses**; then **Regulations, Guidance and Communications**. The current Enforcement Policy is included on the NRC's website at www.nrc.gov; select **About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents**; then **Enforcement Policy (Under 'Related Information')**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC document system (ADAMS), accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

P. Harden

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No reply to this letter is required. Please contact Mark Roberts (610-337-5094) if you have any questions regarding this matter.

Sincerely,

/RA/

Marc S. Ferdas, Chief
Decommissioning and Technical
Support Branch
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 05000320/2015008

cc w/encl: Distribution via ListServ

P. Harden

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000320/2015008
Docket No. 05000320
License No. DPR-73
Licensee: GPU Nuclear, Inc. (GPUN)
Facility: Three Mile Island Station, Unit 2 (TMI-2)
Address: 341 White Pond Drive
Akron, OH 44320
Inspection Dates: May 11–13, 2015
Inspector: Mark C. Roberts
Senior Health Physicist
Decommissioning and Technical Support Branch
Division of Nuclear Materials Safety
Approved By: Marc S. Ferdas, Chief
Decommissioning and Technical Support Branch
Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

GPU Nuclear, Inc. (GPUN)
Three Mile Island Station, Unit 2 (TMI-2)
NRC Inspection Report No. 05000320/2015008

A routine announced safety inspection was conducted on May 11-13, 2015 at TMI-2. The inspector reviewed TMI-2's Post-Defueling Monitored Storage (PDMS) activities related to the safe storage of radioactive material, including site operations, engineering, maintenance, plant support activities, management oversight, and corrective action program (CAP) implementation. The inspection consisted of observations by the inspector, interviews with the FirstEnergy Corporation/GPUN (FirstEnergy/GPUN) and Exelon Generating Company (Exelon) personnel, a review of procedures and records, and plant walk-downs. There are currently no ongoing decommissioning activities being conducted at TMI-2. The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in Inspection Manual Chapter (IMC) 2561, "Decommissioning Power Reactor Inspection Program." Based on the results of this inspection, no findings of safety significance were identified.

REPORT DETAILS

1.0 Background

GPUN retains the license for TMI-2 and maintains the facility. GPUN is a wholly-owned subsidiary of FirstEnergy. As part of the sale of TMI-2, GPUN entered into an agreement with AmerGen (now Exelon) to conduct services for TMI-2. Under this agreement, Exelon provides all services, materials, and equipment required to maintain TMI-2 in PDMS status. Services provided by Exelon include maintenance, surveillance testing (ST), and implementation of the activities required in the Safety Analysis Report (SAR), Technical Specification (TS), and the GPUN PDMS Quality Assurance (QA) Plan.

In December 1993, TMI-2 received a possession-only license from the NRC to enter PDMS. Currently, TMI-2 is in long-term monitored storage. In June 2013, GPUN submitted to the NRC a Post-Shutdown Decommissioning Activities Report (PSDAR) (ADAMS No. ML13190A366) pursuant to 10 CFR 50.82(a)(4). GPUN submitted Revision 1 of their PSDAR in November 2013 (ADAMS No. ML13323A497). GPUN plans to synchronize decontamination and dismantling activities at TMI-2 with the decommissioning of the Three Mile Island, Unit 1 (TMI-1), after that unit has been permanently shut-down.

The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in IMC 2561.

2.0 Post-Defueling Monitored Storage Performance and Status Review

- a. Inspection Scope [Inspection Procedures (IPs) 36801, 37801, 40801, 62801, 71801, 83750, 84750, 86750]

A routine announced safety inspection was conducted on May 11-13, 2015 at TMI-2. The inspection consisted of observations by the inspector, interviews with FirstEnergy/GPUN and Exelon personnel, a review of procedures and records, and plant walk-downs. The inspector reviewed the PDMS program as outlined in the PDMS SAR, TS, and PSDAR. The inspector reviewed PDMS activities related to the safe storage of radioactive material, including site operations, engineering, maintenance, plant support activities, management oversight, and corrective action program (CAP) implementation. The inspector also assessed the material condition of TMI-2 facilities during plant tours of the reactor building, containment, auxiliary building, radioactive waste building, and fuel handling building.

The inspector observed the performance of the TMI-2 annual reactor building entry ST and verified that primary containment isolation requirements were being maintained in accordance with TS 3/4.1, "Containment Systems," and TS 3/4.2, "Reactor Vessel Fuel." In addition, as part of the annual reactor building entry the inspector reviewed the performance of radiological surveys, air sampling, monitoring and sampling of radioactive gaseous effluent through the reactor building purge exhaust, and control of the containment isolation airlock.

Enclosure

The inspector reviewed activities, components, and documentation associated with the following PDMS programs: occupational exposure, fire protection, radioactive effluent control, and site radiological environmental monitoring program (REMP). The inspector also reviewed radioactive gaseous effluent release permits, the annual REMP report, the groundwater monitoring program, and the annual effluent report, which included a summary of the radioactive waste management and transportation programs.

The inspector reviewed QA audit documents and CAP reports associated with TMI-2 to determine if issues were being appropriately identified, assessed, and reviewed; and that corrective actions were being appropriately implemented.

b. Observations and Findings

The inspector confirmed that no design changes or plant modifications, as well as, no dismantlement or decommissioning activities were performed since the previous inspection. The inspector confirmed that all required reporting submittals were completed in accordance with TS requirements. The inspector verified that the maintenance and surveillance program for systems and components had been conducted in accordance with the TS requirements and established procedures. During plant walk-downs the inspector did not observe any significant water intrusion into buildings and noted that the material condition of structures and components appeared unchanged since the previous inspection.

The annual radiological effluent and REMP reports demonstrated that all calculated doses were well below regulatory dose criteria of 10 CFR 50, Appendix I. The inspector noted that one shipment of radioactive waste from TMI-2 was shipped offsite during calendar year 2014 and that Exelon received an acknowledgement that the shipment had been received by the vendor.

The inspector determined that scheduled QA audits and self-assessments were conducted timely, and findings or issues identified by these reviews were entered into the station's CAP as Action Reports (AR). Based on the review of ARs, the inspector noted that required corrective actions were being appropriately and timely implemented.

c. Conclusions

Based on the results of this inspection, no findings of safety significance were identified.

3.0 Exit Meeting Summary

On May 14, 2015, the inspector presented the inspection results to Michael Casey, Responsible Engineer of FirstEnergy/GPUN, and Trevor Orth, Director Site Work Management and other members of Exelon management and staff. The inspector confirmed that proprietary information was not removed from the site.

Enclosure

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Boyd, PDMS Supervisor, Exelon Generation Company, LLC
B. Carn, Radiation Protection Technician, Exelon
M. Casey, GPUN Responsible Engineer, TMI-2, FirstEnergy
D. DiVittore, Manager Site Radiation Protection, Exelon
S. Edelman, Radiation Protection, Exelon
M. Fitzwater, Regulatory Assurance, Exelon
T. Orth, Director Site Work Management, Exelon
S. Taylor, Fire Protection Program Engineer, Exelon
L. Weber, Environmental Chemist, Chemistry/Environmental/Radioactive Waste, Exelon
G. Wright, Work Management/PDMS Manager, Exelon

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Technical Specifications for PDMS - Amendment 63 for License 50-320 issued May 1, 2009
Post Defueling Monitored Storage Safety Analysis Report, Update 10, dated August 2013
Post-Shutdown Decommissioning Activities Report, Revision 1, dated November 2013
Three Mile Island Nuclear Power Station Post-Shutdown Decommissioning Activities Report, June 2013
Combined 2014 Annual Radioactive Effluent Release Report, dated April 30, 2015
GPU Nuclear, Inc., Company Nuclear Review Board, Three Mile Island Nuclear Generating Station Unit 2 Meeting Minutes, October 1 and 2, 2014
Shipping papers - Shipment No. RS-14-131-II, November, 13, 2014
Annual Radiological Environmental Operating Report (January 1 through December 31, 2014), April 2015
2015 Unit 2 Reactor Building Entry Summary (ALARA Plan Number: 15-004), May, 2015
Radiation Work Permit – TM2-15-00211, Rev. 0, Unit 2 Reactor Building Annual Entry and PDMS Survey
ALARA Plan Number 15-004 - Unit 2 Reactor Building Annual PDMS Survey and Unit 2 Management Inspection
TMI-2 Radiological Survey Data
Human Performance Fundamentals and Tools Pocket Guide, Revision 4
Post Defueling Monitored Storage Quality Assurance Plan, Revision 15, dated May 10, 2013
TMI-2 Post Defueling Monitored Storage (PDMS) Audit Report, Audit NOSA-TMI-14-12 (AR 2405728), November 17, 2014 to December 17, 2014
Fleet Oversight Audit Report: TMI-C-15-04-28, dated April 2, 2015
HU-AA-1211, Revision 10, Pre-Job Briefings
HU-AA-1211, F-01, Revision 3, Pre-Job Briefing Checklist
HU-AA-1211, F-02, Revision 0, HLA Briefing Worksheet
Exelon Nuclear 2-minute drill at the job site briefing card, September 2014

PDMS Monthly Update Reports (February - December 2014 and January - February 2015)
 Radioactive Effluent Control Program analytical results and liquid waste permits
 (January 2015-March 2015)

RP-AA-301, Revision 8, Radiological Air Sampling Program
 RP-AA-302, Revision 6, Determination of Alpha Levels and Monitoring
 RP-AA-401, Revision 18, Operational ALARA Planning and Controls
 RP-AA-401-1002, Revision 6, Radiological Risk Management
 RP-AA-460, Revision 25, Controls for High and Locked High Radiation Areas
 RP-AA-460-001, Revision 5, Controls for Very High Radiation Areas
 RP-AA-460-002, Revision 2, Additional High Radiation Exposure Control
 RP-AA-700, Revision 3, Controls for Radiation Protection Instrumentation
 2104-1A, Revision 9, Reactor Building Entry
 2104-1B, Revision 13A, TMI-2 Reactor Building Purge
 2104-40C, Revision 1, TMI-2 Turbine Building Sump Transfer to the IWTS
 2104-40F, Revision 2, TMI-2 Tendon Access Gallery Sump Transfer to IWTS
 2301-1, Revision 23, PDMS Daily Checks
 2301-4.3, Revision 5, TMI-2 Reactor Building (Containment) PDMS Radiological Surveys
 2303-5.10, Revision 6, TMI-2 Reactor Building Purge Exhaust Filter Ops. Check
 6610-ADM-4250.14, Revision 6, Releasing Radioactive Gaseous Effluents – TMI-2 Reactor
 Building Purges

ARs: 01669274, 02475659, 02412912, 01650412, 02426264, 02372444, 02456243, 02348572,
 02457542, 02426266, 02422614, 02441268, 02456227, 02374443

LIST OF ACRONYMS USED

AR	Action Report
CAP	Corrective Action Program
CFR	Code of Federal Regulations
Exelon	Exelon Generating Company
FirstEnergy	FirstEnergy Corp.
GPUN	GPU Nuclear, Inc.
IMC	Inspection Manual Chapter
IP	Inspection Procedure
NRC	Nuclear Regulatory Commission
PDMS	Post-Defueling Monitored Storage
PSDAR	Post-Shutdown Decommissioning Activities Report
QA	Quality Assurance
REMP	Radiological Environmental Monitoring Program
SAR	Safety Analysis Report
ST	Surveillance Test
TMI-1	Three Mile Island Station, Unit 1
TMI-2	Three Mile Island Station, Unit 2
TS	Technical Specifications