



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

April 26, 2016

Docket No. 05000320

License No. DPR-73

Gregory H. Halnon
President
GPU Nuclear, Inc.
FirstEnergy Corporation
Mail Stop: A-WAC-B1
341 White Pond Drive
Akron, OH 44320

SUBJECT: GPU NUCLEAR, INC., THREE MILE ISLAND STATION, UNIT 2 – NRC
INSPECTION REPORT 05000320/2016008

Dear Mr. Halnon:

On April 11-13, 2016, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Three Mile Island Station Unit 2 (TMI2). 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 April 13, 2016, 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).

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G. Halnon

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No reply to this letter is required. Please contact Laurie A. Kauffman (610-337-5323) if you have any questions regarding this matter.

Sincerely,

/RA/

Raymond Powell, Chief
Decommissioning and Technical
Support Branch
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 05000320/2016008

cc w/encl: Distribution via ListServ

G. Halnon

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No reply to this letter is required. Please contact Laurie A. Kauffman (610-337-5323) if you have any questions regarding this matter.

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000320/2016008
Docket No. 05000320
License No. DPR-73
Licensee: GPU Nuclear, Inc. (GPUN)
Address: 341 White Pond Drive
Akron, OH 44320
Facility: Three Mile Island Station, Unit 2 (TMI2)
Inspection Dates: April 11–13, 2016
Inspectors: Briana DeBoer
Health Physicist
Decommissioning and Technical Support Branch
Division of Nuclear Materials Safety
Laurie A. Kauffman
Health Physicist
Decommissioning and Technical Support Branch
Division of Nuclear Materials Safety
Approved By: Raymond Powell, Chief
Decommissioning and Technical Support Branch
Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

GPU Nuclear, Inc. (GPUN)
Three Mile Island Station, Unit 2 (TMI2)
NRC Inspection Report No. 05000320/2016008

A routine announced safety inspection was conducted on April 11-13, 2016 at TMI2. The inspector reviewed TMI2'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 TMI2. 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 TMI2 and maintains the facility. GPUN is a wholly-owned subsidiary of FirstEnergy. As part of the sale of TMI2, GPUN entered into an agreement with AmerGen (now Exelon) to conduct services for TMI2. Under this agreement, Exelon provides all services, materials, and equipment required to maintain TMI2 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, TMI2 received a possession-only license from the NRC to enter PDMS. Currently, TMI2 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 [Code of Federal Regulations (CFR) 50.82(a)(4)]. GPUN submitted Revision 1 of their PSDAR in November 2013 (ADAMS No. ML13323A497) and Revision 2 in December 2015 (ML15338A222). GPUN plans to synchronize decontamination and dismantling activities at TMI2 with the decommissioning of the Three Mile Island, Unit 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, 64704, 71801, 83750, 84750, 86750]

A routine announced safety inspection was conducted on April 11-13, 2016 at TMI2. 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 TMI2 facilities during plant tours of the reactor building, containment (exterior only), auxiliary building, radioactive waste building, and fuel handling building.

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 reviewed the offsite dose calculation manual, the 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.

Enclosure

The inspector reviewed QA audit documents and CAP reports associated with TMI2 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 only change to the PDMS program was to reduce the frequency of the reactor building surveys from annual to every five years. The change was effective after the 2015 reactor building survey and therefore the next reactor building survey will be in 2020. 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 and supporting analyses demonstrated that all calculated doses were well below regulatory dose criteria of 10 CFR 50, Appendix I. The inspector noted that no radioactive waste from TMI2 was shipped offsite during calendar year 2016.

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 April 13, 2016, 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.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

E. Hertkorn, PDMS Supervisor, Exelon Generation Company, LLC
M. Casey, GPUN Responsible Engineer, TMI2, FirstEnergy
M. Fitzwater, Regulatory Assurance, Exelon
J. Goldman, Regulatory Assurance Manager, Exelon
T. Orth, Director Site Work Management, Exelon
R. Myers, Fire Marshal, 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 (SAR), Update 11, dated August 2015
Post-Shutdown Decommissioning Activities Report, Revision 2, dated December 2015
Biennial 10 CFR 50.59 and PDMS SAR Report, April 2014
CY-TM-170-300, Revision 3, Offsite Dose Calculation Manual
TMI Unit 2 Plant SAR Update 2015-T2-001, 50.59 Applicability Review Form, dated July 2015
Combined 2014 Annual Radioactive Effluent Release Report, dated April 2015
2014 Annual Radiological Environmental Operating Report, dated April 2015
Radiation Work Permit – TM2-15-00212, Rev. 1, Process MWHT Water and Associated Tasks
Post Defueling Monitored Storage Quality Assurance Plan, Revision 17, dated January 26, 2016
TMI2 Post Defueling Monitored Storage Audit Report, Audit NOSA-TMI-15-14 (AR 2553380),
dated October 28, 2015
Fleet Oversight Audit Report: TMI-C-15-04-28, dated April 30, 2015
PDMS Monthly Update Reports (March - December 2015 and January – February 2016)
Radioactive Effluent Control Program analytical results and liquid waste permits
(January 2015 - March 2016)
Radiological Environmental Monitoring Program analytical results (January 2015 – March 2016)
RP-AA-401, Revision 21, Operational ALARA Planning and Controls
RP-AA-401-1002, Revision 8, Radiological Risk Management
RP-AA-460, Revision 28, Controls for High and Locked High Radiation Areas
RP-AA-460-001, Revision 6, Controls for Very High Radiation Areas
RP-AA-460-002, Revision 3, Additional High Radiation Exposure Control
RP-TM-220-1002, Revision 1, Special Bioassay program for Transuranic Areas of TMI2
2104-40C, Revision 1, TMI2 Turbine Building Sump Transfer to the IWTS
2104-40F, Revision 2, TMI2 Tendon Access Gallery Sump Transfer to IWTS
2301-1, Revision 23, PDMS Daily Checks
2303-4.15A, Revision 13, PDMS RMS Functional Test (February 2016)
2OPS-S20, Revision 4, PDMS Annual Walkdowns

OP-2TM-2232-401, Revision 0, TMI2 Radwaste Processing
OP-2TM-2244-201, Revision 0, Verification of TMI2 Containment Isolation
(July – September 2015 and October – December 2015)
TMI2 Collective Exposure 2015 and January through February 2016
Routine Radiological Survey Schedule (Weekly, Monthly, Quarterly)
Radiological Surveys Aux Building Monthly and Quarterly
Radiological Surveys Fuel Handling Building Monthly and Quarterly
CC-AA-211, Revision 7, Fire Protection Program
Linear Heat Detection Engineering Evaluation, Exelon No. 2426264-02, dated August 31, 2015
U-8, Revision 44, Hydrostatic Testing of Hose and related work orders
U-10, Revision 34, Portable Fire Extinguisher Inspection and related work orders
2FS-PNL-740, Fire Detection Functional Test and related work orders
ARs: 02446552, 02525313, 02525391, 02567547, 02570533, 02571106, 02591771, 02602293,
02625994, 02629494, 02635821, 02642902, 02646426, 02653633

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
TMI2	Three Mile Island Station, Unit 2
TS	Technical Specifications