



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

July 17, 2017

Docket No. 05000320

License No. DPR-73

Gregory H. Halnon
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 05000320/2017009

Dear Mr. Halnon:

On June 27-28, 2017, 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 inspectors, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with M. Casey, TMI-2 Project Manager, GPU Nuclear Inc., and E. Callan, Site Vice President, Exelon Generating Company (Exelon), and other members of Exelon management and staff on June 28, 2017, 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.

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,

A handwritten signature in black ink, appearing to read 'Raymond Powell', written in a cursive style.

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

Enclosure: Inspection Report No. 05000320/2017009

cc w/encl: Distribution via ListServ

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000320/2017009

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: June 27-28, 2017

Inspectors: Katherine Warner
Health Physicist
Decommissioning and Technical Support Branch
Division of Nuclear Materials Safety

Kimberly Conway
Project Manager
Reactor Decommissioning Branch
Division of Decommissioning, Uranium Recovery, and Waste
Programs

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

EXECUTIVE SUMMARY

GPU Nuclear, Inc. (GPUN)
Three Mile Island Station, Unit 2 (TMI-2)
NRC Inspection Report No. 05000320/2017009

A routine announced safety inspection was conducted on June 27-28, 2017 at TMI-2. The inspectors 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 inspectors, interviews with the FirstEnergy Corporation/GPUN (FirstEnergy/GPUN) and 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, 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 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).

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, 71111.30, 71801, 83750, 84750, 86750]

A routine announced safety inspection was conducted on June 26-28, 2017 at TMI-2. The inspection consisted of observations by the inspectors, interviews with FirstEnergy/GPUN and Exelon personnel, a review of procedures and records, and plant walk-downs. The inspectors reviewed the PDMS program as outlined in the PDMS SAR, TS, and PSDAR. The inspectors reviewed PDMS activities related to the safe storage of radioactive material, including site operations, engineering, maintenance, plant support activities, management oversight, material control and accountability, and corrective action program (CAP) implementation. The inspectors also assessed the material condition of TMI-2 facilities during plant tours of the reactor building, containment (exterior only), auxiliary building, radioactive waste building, and fuel handling building.

The inspectors 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 inspectors 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.

The inspectors 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 inspectors confirmed that no design changes or plant modifications, as well as no dismantlement or decommissioning activities were performed since the previous inspection. The next reactor building survey will be in 2020. The inspectors confirmed that all required reporting submittals were completed in accordance with TS requirements. The inspectors 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 inspectors 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 inspectors noted that no radioactive waste from TMI-2 was shipped offsite during calendar year 2016.

The inspectors 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 inspectors 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 June 28, 2017, the inspectors presented the inspection results to M. Casey, TMI-2 Project Manager, GPU Nuclear Inc., and E. Callan, Site Vice President, Exelon and other members of Exelon management and staff. The inspectors confirmed that proprietary information was not removed from the site.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Boyd, TMI-2 Consultant, FirstEnergy
P. Brady, Reactor Engineering Manager, Exelon
E. Callan, Site Vice President, Exelon
M. Casey, GPUN TMI-2 Project Manager, FirstEnergy
D. DiVittore, Radiological Protection Manager, Exelon
B. DiZebba, Senior Radiation Protection Technician, Exelon
M. Fitzwater, Regulatory Assurance, Exelon
J. Goldman, Regulatory Assurance Manager, Exelon
E. Hertkorn, PDMS Supervisor, Exelon Generation Company, LLC
M. Levy, Lead SNM Coordinator, Exelon
R. Myers, Fire Marshal, Exelon
T. Orth, Director Site Work Management, Exelon
M. Pruskowski, Senior Chemist, Chemistry/Environmental/Radioactive Waste, Exelon
C. Sinn, Radioactive Waste Shipping, Exelon
G. Wright, PDMS Manager, Work Manager, Exelon

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

ARs: 02531672, 02535775, 02618982, 03960870
2016 Annual Report to the First Energy Nuclear Committee of the Board: TMI-2 Company
Nuclear Review Board (NCRB)
2016 Annual Report to the First Energy Nuclear Committee of the Board: TMI-2 Company
Nuclear Review Board (NCRB)
1025, Revision 26, Special Nuclear Material Control (TMI-2)
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
2303-4.15A, Revision 13, PDMS RMS Functional Test (March 2017)
2303-4.15A, Revision 14, PDMS RMS Functional Test (April 2017)
CC-AA-211, Revision 8, Fire Protection Program
CY-TM-170-300, Revision 4, Offsite Dose Calculation Manual
CY-TM-170-3002, Revision 2, TMI-2 Quarterly Sump Composite Log
Fleet Oversight Audit Report: TMI-C-17-04-28, dated April 7, 2017
OP-2TM-2244-201, Revision 0, Verification of TMI-2 Containment Isolation (August 2016,
October 2016, January 2017)
OP-2TM-2244-201, Revision 1, Verification of TMI-2 Containment Isolation (April 2017)
OP-2TM-2232-401, TMI-2 Radwaste Processing
Post Defueling Monitored Storage Monthly Update Reports (January 2016 through May 2017)
Post Defueling Monitored Storage Safety Analysis Report (SAR), Update 11, dated August 2015
Post Defueling Monitored Storage Quality Assurance Plan, Revision 17, dated January 26, 2016

LIST OF DOCUMENTS REVIEWED (Cont'd)

Radioactive Effluent Control Program analytical results and liquid waste permits
 (January - December 2016; January – May 2017)
 Radiological Environmental Monitoring Program analytical results (January 2016 – May 2017)
 Radiological Surveys Aux Building Monthly and Quarterly
 Radiological Surveys Fuel Handling Building Monthly and Quarterly
 Routine Radiological Survey Schedule (Weekly, Monthly, Quarterly)
 RM-TM-906-0001, Revision 0, Monthly Vent Composite Sample
 RP-AA-401, Revision 21, Operational ALARA Planning and Controls
 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-AA-460-1008, Revision 24, Locked High Radiation Control Check (weekly January 2015
 through June 2017)
 RP-AA-605, Revision 6, Attachment 2, Waste Stream Results Review for MWST (May 2017)
 Technical Specifications for PDMS - Amendment 63 for License 50-320 issued May 1, 2009
 TMI-2 Collective Exposure 2016 and January through April 2017
 TMI-15-093, TMI-2 Post-Shutdown Decommissioning Activities Report, Revision 2, dated
 December 2015
 TMI-16-013, TMI-2 Biennial 10 CFR 50.59 and PDMS SAR Report, April 2016
 TMI-17-029, Combined 2016 Annual Radioactive Effluent Release Report, dated April 2017
 TMI-17-040, 2016 Annual Radiological Environmental Operating Report, dated April 2017
 U-8, Revision 46, Hydrostatic Testing of Hose and related work orders
 U-10, Revision 36, Portable Fire Extinguisher Inspection and related work orders

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
TMI-2	Three Mile Island Station, Unit 2
TS	Technical Specifications