



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

October 19, 2020

Docket No. 05000320

License No. DPR-73

Mr. Gregory H. Halnon
President & CNO, GPU Nuclear, Inc.
76 S. Main St
A-GO-18
Akron, OH 44308

**SUBJECT: GPU NUCLEAR, INC., THREE MILE ISLAND NUCLEAR STATION, UNIT 2 –
NRC INSPECTION REPORT 05000320/2020002**

Dear Mr. Halnon:

On August 19 - September 30, 2020, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection of the Three Mile Island Nuclear Station Unit 2 (TMI-2). An on-site inspection was performed August 19, 2020. Additional inspection activities (in office reviews) were conducted remotely as a consequence of the COVID-19 public health emergency (PHE) during the inspection period. 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 plant walk-downs by the inspector, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with you and Trevor Orth, Site Decommissioning Director, Exelon Generating Company (Exelon), and other members of Exelon management and staff on September 30, 2020, at the conclusion of the inspection and are described in the enclosed report. No findings of safety significance were identified.

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, if any, 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, if any, should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select Radioactive Waste; Decommissioning of Nuclear Facilities; 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).

Gregory Halnon

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No reply to this letter is required. Please contact Steve Hammann (610-337-5399) if you have any questions regarding this matter.

Sincerely,

/RA/

Anthony Dimitriadis, Chief
Decommissioning, ISFSI, and Reactor Health
Physics Branch
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 05000320/2020002

cc w/encl: Distribution via ListServ

NRC INSPECTION REPORT NO. 05000320/2020002, GPU NUCLEAR, INC., THREE MILE ISLAND NUCLEAR STATION, UNIT 2, MIDDLETOWN, PENNSYLVANIA DATED OCTOBER 19, 2020

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SUNSI Review Complete: SHammann

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OFFICE	DNMS/RI	N	DNMS/RI	N			
NAME	SHammann/sh		A.Dimitriadis/ad				
DATE	10/15/2020		10/19/2020				

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000320/2020002
Docket No. 05000320
License No. DPR-73
Licensee: GPU Nuclear, Inc. (GPUN)
Facility: Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Address: Middletown, PA
Inspection Dates: August 19 – September 30, 2020
Inspectors: Steve Hammann
Senior Health Physicist
Decommissioning, ISFSI, and Reactor Health Physics Branch
Division of Nuclear Materials Safety
Approved By: Anthony Dimitriadis, Chief
Decommissioning, ISFSI, and Reactor Health Physics 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. 05000320/2020002

A routine announced safety inspection was conducted on August 19 – September 30, 2020, of TMI-2. An on-site inspection was performed August 19, 2020. Additional inspection activities were conducted remotely during the inspection period as a consequence of the COVID-19 public health emergency (PHE). The inspection included a review of radiological controls programs, maintenance, plant support activities, management oversight, and the corrective action program (CAP) while in Post-Defueling Monitored Storage (PDMS) status. The inspection consisted of interviews with 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 Corp. 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, 71801, 83750, 84750, 86750]

A routine announced safety inspection was conducted on August 19 – September 30, 2020 of TMI-2. The inspection consisted of interviews with 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 inspection included a review of radiological programs, maintenance, plant support activities, management oversight, and the CAP while in PDMS status. The inspector also assessed the material condition of TMI-2 facilities during plant tours of the auxiliary building, fuel handling building, and the control building.

The inspector reviewed activities, components, and documentation associated with the following PDMS programs: occupational exposure, radioactive effluent control, and site radiological environmental monitoring program (REMP). The inspector reviewed the offsite dose calculation manual, the radioactive effluent release permits, the annual REMF 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 surveillances of containment isolation, unfiltered leak rate from containment, and containment air locks as required by the TS. The inspector reviewed the CAP and audit 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 there were no design changes since the last inspection requiring 50.59 evaluations. The inspector confirmed that no dismantlement or decommissioning activities were performed since the previous inspection and confirmed that all required reporting submittals were completed in accordance with regulatory requirements. The inspector also verified that the maintenance and surveillance program for systems and components had been conducted in accordance with the established site procedures.

The inspector reviewed the annual radiological effluent, REMP reports and supporting analyses and determined that all calculated doses were well below regulatory dose criteria of 10 CFR 50, Appendix I. The inspector noted that there were no radioactive waste shipments from TMI-2 during calendar year 2019.

The inspector determined that scheduled QA audits 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 appear to be 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 September 30, 2020, the inspector presented the inspection results to Gregory Halnon, President and CNO, GPUN, and Trevor Orth, Site Decommissioning Director, Exelon, and other members of Exelon management and staff. The inspector confirmed that no proprietary information was retained by the inspectors or documented in this report.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

G. Halnon, GPUN President and CNO, GPUN
T. Orth, Site Decommissioning Director, Exelon
B. Brady, Regulatory Assurance, Exelon
E. Hertkorn, PDMS Supervisor, Exelon
R. Holmes, Manager Site Radiation Protection, Exelon
G. Wright, PDMS Manager, Work Manager, Exelon

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

1038, Rev. 91, Administrative Controls, Fire Protection Program
TMI Unit 2, Rev. 13, Fire Protection Program Evaluation
2104-1A, Rev. 10, Reactor Building Entry
2104-29, Rev. 11, TMI-2 Miscellaneous Liquid Radwaste Disposal (WDL) in PDMS
2301-1, Rev. 23, PDMS Daily Checks
2301-4.3, Rev. 6, TMI-2 Reactor Building (Containment) PDMS Radiological Surveys
2303-6.1, Rev. 6, TMI-2 Reactor Building Unfiltered Leak Rate Test
2303-11.20A, Rev. 7, Operability Check of the TMI-2 Equipment Hatch Personnel Airlock Doors
2303-11.20B, Rev. 7, Operability Check of the TMI-2 Ante Room Personnel Airlock Doors
AR 04247808, 04256518, 04257681, 04288096, 04290820, 04312721, 04320610, 04321393,
04357175
AR list June 2019-July 2020
Biennial 10 CFR 50.59 and PDMS SAR Report, April 13, 2020
DD-24, Rev. 2, Maintenance Department Description
Decommissioning Nuclear Safety Review Board, Three Mile Island Nuclear Generating Station
Unit 2, August 5, 2020 Meeting Minutes
Drawing Numbers 302-2042, 302-2219
ER-AA-200, Rev. 4, Preventive Maintenance Program
Liquid Permit Post-Release Data, L-20200608-858-B
MA-AA-716,230, Rev. 11, Predictive Maintenance Program
MA-AA-1000, Rev. 22, Conduct of Maintenance Manual
NOSA-TMI-19-12, TMI-2 Post Defueling Monitored Storage Audit Report
OP-2TM-2244-201, Rev 1, Verification of TMI-2 Containment Isolation
OP-TM-122-951, Rev. 1, Unit 2 Flood Protection Actions
Operations, PDMS, Daily Log Sheet, August 19, 2020
PDMS Manual For Three Mile Island Unit 2, Rev. 0
PDMS Quality Assurance Plan, Rev. 18
PDMS Safety Analysis Report, Update 13
PDMS Total Work Order Backlog – August 2020
Post Shutdown Decommissioning Activities Report (PSDAR), Rev. 2
RWP TM-2-20-00201,00202, 00203, 00209
Survey # 2020-073994, 075479, 075522, 075580, 075632, 078918
Technical Specifications for PDMS, License 50-320, Amendment 63

LIST OF DOCUMENTS REVIEWED (Cont'd)

TMI-2 Collective Exposure 2019

Work Orders 04664360-01, 04664364-01, 049288483, 04935228, 05031909

LIST OF ACRONYMS USED

AR	Action Report
CAP	Corrective Action Program
CFR	Code of Federal Regulations
Exelon	Exelon Generating Company
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
PHE	Public Health Emergency
QA	Quality Assurance
REMP	Radiological Environmental Monitoring Program
SAR	Safety Analysis Report
TMI-2	Three Mile Island Station, Unit 2
TS	Technical Specifications