



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

July 29, 2013

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 05000320/2013008**

Dear Mr. Harden:

On April 15 - 17, 2013, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Three Mile Island Station Unit 2 (TMI-2). An in-office review of Licensee Event Report (LER) No. 05000320/2013-001-00, dated June 7, 2013, was also performed as part of this inspection. 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 Greg Halnon, Fleet Director, Regulatory Affairs and other members of the FirstEnergy/GPUN organization, and members of the Exelon management and staff on July 8, 2013, via telephone, at the conclusion of the inspection; and are described in the enclosed report.

The inspection report documents one self-revealing Severity Level IV violation of NRC requirements. The violation is being treated as a Non-Cited Violation (NCV) consistent with Section 2.3.2. of the NRC Enforcement Policy. If you contest the violation or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to: (1) the Regional Administrator, Region I; (2) the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and (3) the NRC Senior Resident Inspector at Three Mile Island Station, Unit 1.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, 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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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).

Please contact Laurie Kauffman (610-337-5323) if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Mr S Ferdas", with a long horizontal stroke extending to the right.

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

Enclosure: Inspection Report No. 05000320/2013008

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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).

Please contact Laurie Kauffman (610-337-5323) if you have any questions regarding this matter.

Sincerely,

Original Signed By Marc S. Ferdas

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

Enclosure: Inspection Report No. 05000320/2013008

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000320/2013008
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: April 15 – 17, and July 8, 2013 (Exit Meeting)
June 7 - July 8, 2013 (In-office Review)

Inspector: Laurie A. Kauffman
Health Physicist
Decommissioning Branch
Division of Nuclear Materials Safety

Approved By: Marc S. Ferdas, Chief
Decommissioning 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. 05000320/2013008

A routine announced safety inspection was conducted on April 15 through 17, 2013 at TMI-2. An in-office review of Licensee Event Report (LER) No. 05000320/2013-001-00, dated June 7, 2013, was also performed as part of this inspection. The inspection included a review of operations and management oversight, maintenance, corrective action program (CAP) implementation, fire protection, and plant support activities while in Post-Defueling Monitored Storage (PDMS) status. The inspection consisted of observations by the inspector, interviews with the FirstEnergy (FirstEnergy) Corporation/GPUN (FirstEnergy/GPUN) and Exelon Generating Company (Exelon) personnel, and a review of procedures and records. 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, one self-revealing Severity Level (SL) IV Non-Cited Violation (NCV) of the Technical Specification (TS) 3.1.1.1, "Primary Containment Isolation," was identified. On September 26, 2012, FirstEnergy/GPUN and Exelon did not maintain primary containment isolation when they did not close two containment isolation valves, Reactor Building Atmosphere Valves 2 and 3 (RBA-V2 and RBA-V3), during performance of procedure 2104-1F, "Reactor Building Air Sampling Operation." Because this violation was self-revealing, of very low safety significance, and was entered into the CAP, this violation is being treated as an NCV, consistent with the NRC Enforcement Policy.

Enclosure

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), TS, and the GPUN PDMS Quality Assurance (QA) Plan (PDMS 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. GPUN plans to actively decommission TMI-2 in parallel with the decommissioning of the Three Mile Island, Unit 1 (TMI-1), after that unit has been permanently shutdown.

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 15 through 17, 2013 at TMI-2. An in-office review of LER No. 05000320/2013-001-00, dated June 7, 2013, was also performed as part of this inspection. The inspector reviewed the PDMS program as outlined in the PDMS SAR and TS to assess the adequacy of management oversight of PDMS responsibilities for the TMI-2 facility. Specifically, the inspector reviewed the decommissioning management and staff organization, and FirstEnergy/GPUN's and Exelon's implementation of PDMS activities related to safe storage of radioactive material. The inspector discussed any design changes or modifications since the previous inspection, reviewed the material condition of TMI-2 facilities during plant tours of the containment building, the auxiliary building, the radioactive waste building, and the fuel handling building.

The inspector reviewed PDMS activities related to the safe storage of radioactive material. The inspection included a plant walk-down and observations of the annual reactor building entry ST. The inspector also reviewed the following activities associated with the reactor building ST: radiological surveys; air sampling; exchanging and analyzing the reactor building breather (passive air flow diaphragm); and monitoring and sampling radioactive gaseous effluent through the reactor building purge exhaust.

The inspector reviewed activities 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 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 also reviewed CAP issue reports and action reports associated with TMI-2 to determine if issues were being properly identified, evaluated, and prioritized.

b. Observations and Findings

The inspector noted one change within FirstEnergy/GPUN organization related to the PDMS activities involving a change in the company's President. The inspector confirmed that no design changes, plant modifications, dismantlement, or decommissioning activities occurred since the previous inspection. The inspector verified that TMI-2 required reporting submittals were completed in accordance with TS requirements. The inspector observed the reactor building entry ST and noted that no significant water intrusion was evident in containment and that the material condition of components remained unchanged since the previous ST.

The inspector verified that the maintenance and surveillance program for selected systems and components had been conducted in accordance with the TS requirements and established procedures. The inspector noted one exception. Specifically, on April 9, 2013, FirstEnergy/GPUN and Exelon personnel during implementation of procedure 2104-1F for preparation for the annual reactor building entry discovered that the 2RBA-V-2 and 2RBA-V-3 valves were in the open position instead of the expected closed position. The inspector verified that the workers implemented immediate corrective actions (to close and verify valves were closed) within thirty minutes after discovery. FirstEnergy/GPUN and Exelon entered this issue into the CAP (IR1499713) and conducted an apparent cause evaluation (ACE). In addition, First Energy/GPUN submitted an LER to the NRC within 60 days of discovery of the event, in accordance with 10 CFR 50.73(a)(2)(i)(B).

The ACE determined that on September 26, 2012, FirstEnergy/GPUN and Exelon personnel did not close containment isolation valves 2RBA-V-2 and 2RBA-V-3 in order to secure sampling of the reactor building atmosphere, in accordance with implementing procedure 2104-1F. It also noted that when Exelon personnel attempted to close the valves on April 9, 2013, the valves were difficult to close and needed a tool to close them. In addition the ACE identified that prior opportunities existed to identify the condition on October 17, 2012 and January 19, 2013, during implementation of procedure OP-2TM-2244-201, "Verification of TMI-2 Containment Isolation."

The inspector verified that the event did not result in an airborne release to an unrestricted area nor did any airborne release exceed the limits of 10 CFR 20. The discovered open pathway was through TMI-2's installed plant filtration system which has continuous radiation monitoring and exhausts through the TMI-2 vent stack.

Enclosure

The annual radiological effluent and the REMP reports demonstrated that all calculated doses were well below regulatory dose criteria of 10 CFR 50, Appendix I. The inspector noted that radioactive waste was not shipped for offsite disposal since the last inspection.

The inspector determined that issues were entered into the CAP, prioritized, and evaluated commensurate with their safety significance. Corrective actions were implemented to address identified issues and were being tracked to closure using the CAP.

c. Conclusions

Based on the results of this inspection, a self-revealing SL IV NCV of the TS 3.1.1.1 was identified. Specifically, TS 3.1.1.1 requires that, primary containment isolation shall be maintained. Contrary to the above, First Energy/GPUN and Exelon personnel did not maintain primary containment isolation in accordance with procedures from September 26, 2012 to April 9, 2013. Specifically, on September 26, 2012, FirstEnergy/GPUN and Exelon personnel did not close containment isolation valves 2RBA-V-2 and 2RBA-V-3 after completing reactor building atmosphere sampling activities, in accordance with implementing procedure 2104-1F.

Because this violation was self-revealing, of very low safety significance and was entered into the CAP, this violation is being treated as a NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000320/2013-01; Primary Containment Isolation Not Maintained In Accordance with Technical Specifications)**

3.0 Exit Meeting Summary

On July 8, 2013, the inspector presented the inspection results to Greg Halnon, Fleet Director, Regulatory Affairs and other members of the FirstEnergy/GPUN organization, and members of the Exelon management and staff. The inspector confirmed that proprietary information was not removed from the site.

PARTIAL LIST OF PERSONS CONTACTED**Licensee**

J. Boyd, PDMS Supervisor, Exelon Generation Company LLC
 M. Casey, GPUN Responsible Engineer, TMI-2, FirstEnergy
 D. DiVittore, Manager Site Radiation Protection
 M. Fitzwater, Regulatory Assurance
 S. Fuhrman, Work Management/PDMS Manager, Exelon
 T. Geyer, Acting Manager Site Nuclear Oversight
 G. Gillespie, FirstEnergy/GPUN, Chemistry
 R. Libra, Site VP, Exelon Generation Company LLC
 R. Maylish, FirstEnergy/GPUN, Chemistry
 M. Newcomer, Plant Manager, Exelon
 J. Popielarski, Work Management Director, Exelon
 E. Schmeichel, NOS Lead /Acting Manager
 L. Weber, Environmental Chemist, Chemistry/Environmental/Radioactive Waste, Exelon

ITEMS OPEN, CLOSED, AND DISCUSSED**Open/Closed**

05000320/2013-01	NCV	Primary Containment Isolation Not Maintained In Accordance with Technical Specifications
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Closed

05000320/2013-001-00	LER	TMI-2 Containment Isolation Valves Discovered Out of Position
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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 9, dated March 22, 2013
 Post Defueling Monitored Storage Quality Assurance Plan, Revision 14, dated March 22, 2013
 Nuclear Oversight Audit Report: NOSA-TMI-12-12, dated November 29, 2012
 TMI-2 Biennial 10 CFR 50.59 and PDMS SAR Report, dated April 30, 2012
 Licensee Event Report (LER) No. 2013-001-00, "TMI-2 Containment Isolation Valves Discovered Out of Position", dated June 7, 2013
 Apparent Cause Evaluation, "TMI-2 Containment Isolation Valves Discovered Out of Position"
 PDMS Monthly Update Reports (January – December 2012 and January 2013 – March 2013)
 TMI-2 collective exposure (January – December 2012 and January 2013 – March 2013)
 2013 TMI-2 Reactor Building Entry Summary (ALARA Plan Number: 13-003), April 18, 2013
 ALARA Post-Job Review (Plan No. 13-003; Radiation Work Permit TMI2-13-211), April 26, 2013
 Unit 2 Fire Detection Functional Test (Work Order: R2188033)
 Combined 2012 Annual Radioactive Effluent Release Report, dated April 22, 2013
 Annual Radiological Environmental Operating Report (January 1 through December 31, 2012)

LIST OF DOCUMENTS REVIEWED (CONT'D)

Radiological Environmental Monitoring Program analytical results (January 2012-February 2013)
 2012 Annual Radioactive Effluent Release Report, dated April 22, 2013
 Radioactive Effluent Control Program analytical results (January 2012-February 2013)
 GPU Nuclear, Inc., Company Nuclear Review Board, Three Mile Island Nuclear Generating Station Unit 2 Meeting Minutes, dated May 10, 2012
 GPU Nuclear, Inc., Company Nuclear Review Board, Three Mile Island Nuclear Generating Station Unit 2 Meeting Minutes, Revision 1, dated November 15, 2012
 CY-TM-170-300, Offsite Dose Calculation Manual
 IC-168, Unit 2 Fire Detection Functional Test
 OP-2TM-2244-201, Verification of TMI-2 Containment Isolation
 OP-TM-AOP-003, Level EP, Earthquake
 OP-TM-AOP-0031, Earthquake
 RP-AA-401, Operational ALARA Planning and Controls
 RP-AA-401-1002, Radiological Risk Management
 RP-AA-460, Controls for High and Locked High Radiation Areas
 RP-AA-460-001, Controls for Very High Radiation Areas
 RP-AA-460-002, Additional High Radiation Exposure Control
 RP-TM-220-1002, Special Bioassay Program for Transuranic Areas of TMI-2
 2104-1A, Reactor Building Entry
 2104-1B, TMI-2 Reactor Building Purge
 2104-1C, Reactor Building Breather Shutdown
 2104-1F, Reactor Building Air Sampling Operation
 2104-40C, TMI-2 Turbine Building Sump Transfer to the IWTS
 2104-40F, TMI-2 Tendon Access Gallery Sump Transfer to IWTS
 2301-1, PDMS Daily Checks
 2301-1.1, TMI-2 Reactor Vessel Fuel Removal/Rearrangement
 2301-4.3, TMI-2 Reactor Building (Containment) PDMS Radiological Surveys
 2301-4.7, TMI-2 Vent Sampling (weekly and monthly composite samples)
 2301-4.7D, TMI-2 Sampling and Analysis of the Reactor Building Breather System
 2303-4.15A, PDMS RMS (Victoreen) Functional Test
 2303-5.10, TMI-2 Reactor Building Purge Exhaust Filter Ops Check
 2303-11.25, U2 Containment Isolation/Air Locks (WO: R2181415, April 20, 2012)
 6610-ADM-4250.14, Releasing Radioactive Gaseous Effluents – TMI-2 Reactor Building Purges

AR 01439618; AR 1499713; AR 01355641; AR 01492237

LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
CAP	Corrective Action Program
CFR	Code of Federal Regulations
FirstEnergy	FirstEnergy Corp.
GPUN	GPU Nuclear, Inc.
IMC	Inspection Manual Chapter

LIST OF ACRONYMS USED (CONT'D)

IP	Inspection Procedure
LER	Licensee Event Report
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
PDMS	Post-Defueling Monitored Storage
POL	Possession Only License
QA	Quality Assurance
QA Plan	Quality Assurance Plan
RBA-V2	Reactor Building Atmosphere Valve 2
RBA-V3	Reactor Building Atmosphere Valve 3
REMP	Radiological Environmental Monitoring Program
SAR	Safety Analysis Report
SL	Severity Level
ST	Surveillance Test
TMI-1	Three Mile Island Station, Unit 1
TMI-2	Three Mile Island Station, Unit 2
TS	Technical Specifications