



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

January 27, 2022

Docket No. 05000320

License No. DPR-73

Mr. John Sauger
President and Chief Nuclear Officer
TMI-2 Solutions, LLC
121 West Trade Street, Suite 2700
Charlotte, NC 28202

SUBJECT: TMI-2 SOLUTIONS, LLC, THREE MILE ISLAND NUCLEAR STATION, UNIT 2 –
NRC INSPECTION REPORT 05000320/2021004

Dear Mr. Sauger:

On December 31, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection under Inspection Manual Chapter 2561 "Decommissioning Power Reactor Inspection Program," at the permanently shutdown Three Mile Island Nuclear Station Unit 2 (TMI-2). On-site inspections were performed November 17, and December 1, 2021. 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 observations and plant walkdowns by the inspector, interviews with site personnel, and a review of procedures and records. The results of the inspection were discussed with Mr. Gerry van Noordennen, Sr. Vice President, Energy Solutions, and Trevor Orth, Site Decommissioning Director, Exelon Generating Company (Exelon), and other members of Exelon management and staff on January 6, 2022 and are described in the enclosed report.

Within the scope of this inspection, no violations 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).

J. Sauger

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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,

Anthony Dimitriadis, Chief
Decommissioning, ISFSI, and Reactor Health
Physics Branch
Division of Radiological Safety and Security

Enclosure: Inspection Report No. 05000320/2021004

cc w/encl: Distribution via ListServ

NRC INSPECTION REPORT NO. 05000320/2021004, TMI-2 SOLUTIONS, LLC, THREE MILE ISLAND NUCLEAR STATION, UNIT 2, MIDDLETOWN, PENNSYLVANIA DATED JANUARY 27, 2022.

DOCUMENT NAME: https://usnrc.sharepoint.com/:w:/r/teams/Region-I-Decommissioning-Branch/_layouts/15/Doc.aspx?sourcedoc=%7BA745E626-C391-44C6-9C35-674A2A525727%7D&file=TMI%20%202021%202nd%20inspection.docx&action=default&mobileredirect=true

SUNSI Review Complete: SHammann

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OFFICE	DNMS/RI	N	DNMS/RI	N			
NAME	SHammann/sh		A.Dimitriadis/ad				
DATE	01/19/2022		01/27/2022				

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Report No. 05000320/2021004
Docket No. 05000320
License No. DPR-73
Licensee: TMI-2 Solutions, LLC (TMI-2 Solutions)
Facility: Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Address: Middletown, PA
Inspection Dates: July 1 – December 31, 2021
Inspectors: Steve Hammann
Senior Health Physicist
Decommissioning, ISFSI, and Reactor Health Physics Branch
Division of Radiological Safety and Security
Approved By: Anthony Dimitriadis, Chief
Decommissioning, ISFSI, and Reactor Health Physics Branch
Division of Radiological Safety and Security

Enclosure

EXECUTIVE SUMMARY

TMI-2 Solutions, LLC
Three Mile Island Station, Unit 2 (TMI-2)
NRC Inspection Report No. 05000320/2021004

A routine announced safety inspection was completed on December 31, 2021 of TMI-2. On-site inspections were performed November 17, and December 1, 2021. Additional inspection activities were conducted remotely during the inspection period as a consequence of the COVID-19 public health emergency (PHE). The inspection was limited to specific activities; entries into the reactor building, removal of contaminated lead bricks, and radwaste shipments. The inspection consisted of observations by the inspector, interviews with TMI-2 Solutions and Exelon personnel, a review of documentation, and plant walkdowns. There were no major decommissioning activities conducted at TMI-2 since the previous inspection in 2021. The NRC's program for overseeing the safe storage and decommissioning 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 violations were identified.

REPORT DETAILS

1.0 Background

In December 1993, TMI-2 received a possession-only license from the NRC to enter post-defueling monitored storage (PDMS). Currently, TMI-2 is in long-term monitored storage. On December 18, 2020 the license for TMI-2 was transferred from GPU Nuclear, Inc. to TMI-2 Solutions. An agreement is in place between TMI-2 Solutions and Exelon regarding 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 Quality Assurance Program. On March 17, 2021 TMI-2 Solutions submitted Revision 4 of the Post-Shutdown Decommissioning Activities Report (PSDAR) (ADAMS No. ML21084A229).

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) 71801, 83750, 86750]

A routine announced safety inspection was completed on December 31, 2021 of TMI-2. The inspection was limited to specific activities; entries into the reactor building, removal of contaminated lead bricks and radwaste shipments. The inspection consisted of observations by the inspector, interviews with TMI-2 Solutions and Exelon personnel, review of documentation, and plant walkdowns.

The inspector attended pre-job and post job briefings, reviewed As Low As Reasonably Achievable (ALARA) plans, radiation work permits, and work orders for the licensee's entries into the reactor building to verify radiation work activities were pre-planned effectively to limit worker exposure and to verify adherence to site procedures.

The inspector observed site personnel moving contaminated lead bricks for disposal and radiation protection (RP) technicians providing job coverage for the ongoing activities. The inspector performed a walk-down of radioactive waste storage locations and observed waste packaging operations. The inspector also reviewed several transportation packages for the shipment of radioactive waste as well as the certifications of the shippers. The review included records of shipment packaging, surveys, labeling, marking, placarding, vehicle checks, and emergency instructions to ensure compliance with the applicable NRC and Department of Transportation regulations.

b. Observations and Findings

The inspector verified the entries into the reactor building were performed in accordance with plant procedures. The inspector determined that pre-job briefings identified the magnitude and extent of radiological hazards, post job briefings were thorough, and management maintained a sufficient level of involvement. The inspector determined ALARA plans for the entries were effective in limiting worker exposures and the exposures were appropriate for the scope of work performed. The inspector determined that RP staff effectively controlled work activities and used appropriate instruments for the activities and surveys performed. The inspector verified that technician training and qualifications were up-to-date.

The inspector verified solid radioactive waste was adequately stored and monitored, that radioactive waste shipping paperwork was properly completed and personnel were knowledgeable of their duties and responsibilities. The inspector determined radioactive waste shipped for disposal was properly classified, described, packaged, marked, and labeled, was in proper condition for transportation, and met the NRC and Department of Transportation regulatory requirements.

The inspector confirmed that no major dismantlement or decommissioning activities were performed since the previous inspection

c. Conclusions

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

3.0 Exit Meeting Summary

On January 6, 2022, the inspector presented the inspection results to Mr. Gerry van Noordennen, Sr. Vice President, Regulatory Affairs, Energy Solutions, and Mr. Trevor Orth, Site Decommissioning Director, Exelon, and other members of Exelon management and staff. No proprietary information was retained by the inspector or documented in this report.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Gerry van Noordennen, Sr. Vice President
G. McCarty, Radiation Protection Manager
R. Newmaster, Sr. Project Manager

Exelon

T. Orth, Site Decommissioning Director
R. Holmes, Manager Site Radiation Protection
C. Smith, Manager, Regulatory Affairs
W. Price, PDMS Manager

State of PA

S. Acker, Director Nuclear Safety Division

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

2104-1A, Rev. 11, Reactor Building Entry
2104-29, Rev. 11, TMI-2 Miscellaneous Liquid Radwaste Disposal in PDMS
ALARA Plan Number 21-006, Unit 2 Reactor Building Management Drone Inspection
ALARA Plan Number 21-007, Unit 2 Reactor Building Polar Crane, Electrical Inspections and
Associated RP Surveys
ALARA Post Job Review, 21-006
ALARA Post Job Review, 21-007
Radiation Work Permit TM-2-21-00211
RP Survey # 2021-100099
RP Survey # 2021-111490
Radwaste Transportation Package, Shipment Number 2021-0008
Radwaste Transportation Package, Shipment Number 2021-0011

LIST OF ACRONYMS USED

ALARA	As Low As Reasonably Achievable
CFR	Code of Federal Regulations
Exelon	Exelon Generating Company
IMC	Inspection Manual Chapter
IP	Inspection Procedure
NRC	Nuclear Regulatory Commission
PDMS	Post-Defueling Monitored Storage
PHE	Public Health Emergency
RP	Radiation Protection
SAR	Safety Analysis Report
TMI-2	Three Mile Island Station, Unit 2
TMI-2 Solutions	TMI-2 Solutions, LLC
TS	Technical Specifications