



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION I
475 ALLENDALE ROAD, SUITE 102
KING OF PRUSSIA, PA 19406-1415

August 17, 2022

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 05000320/2022003

Dear Mr. Sauger:

On June 30, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection under Inspection Manual Chapter 2561, "Decommissioning Power Reactor Inspection Program," at the permanently shut down Three Mile Island Nuclear Station Unit 2 (TMI-2). An on-site inspection was performed June 6, 2022. 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 a review of procedures and records, interviews with site personnel, and plant walk-downs. The results of the inspection were discussed with Mr. Frank Helin, Project Director, Energy Solutions, Mr. Trevor Orth, Site Decommissioning Director, Constellation Nuclear, and other members of TMI-2 Solutions, LLC and Constellation Nuclear staff on July 25, 2022, at the conclusion of the inspection and are described in the enclosed report.

Within the scope of this inspection, no violations of more than minor safety significance were identified.

In accordance with Title 10 of the *Code of Federal Regulations* (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 of my staff at 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

Docket No: 05000320

License No: DPR-73

Enclosure: Inspection Report No. 05000320/2022003

cc w/encl: Distribution via ListServ

J. Sauger

SUBJECT: TMI-2 SOLUTIONS, LLC, THREE MILE ISLAND NUCLEAR STATION, UNIT 2 – NRC INSPECTION REPORT 05000320/2022003 DATED AUGUST 17, 2022

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SUNSI Review Complete: SHammann

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OFFICE	DRSS/RI	N	DRSS/RI	N			
NAME	SHammann		A.Dimitriadis				
DATE	08/11/2022		08/17/2022				

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000320/2022003

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: January 1 – June 30, 2022

Inspector: 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

EXECUTIVE SUMMARY

TMI-2 Solutions, LLC
Three Mile Island Station, Unit 2 (TMI-2)
NRC Inspection Report No. 05000320/2022003

A routine announced decommissioning safety inspection was completed at the permanently shut-down Three Mile Island Station, Unit 2 (TMI-2) on June 30, 2022. An on-site inspection was performed June 6, 2022. 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 TMI-2 Solutions and Constellation Nuclear, LLC (Constellation) personnel, a review of procedures and records, and plant walk-downs. There were no major decommissioning activities conducted at TMI-2 since the last inspection in 2021. 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 violations of more than minor safety significance were identified.

REPORT DETAILS

1.0 Background

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. 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 Constellation regarding TMI-2. Under this agreement, Constellation provides all services, materials, and equipment required to maintain TMI-2 in PDMS status. Services provided by Constellation 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) 37801, 40801, 71801, 83750, 84750, 86750]

A routine announced safety inspection was conducted from January 1 – June 30, 2022, of TMI-2. The inspection consisted of interviews with TMI-2 Solutions and Constellation 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, turbine 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 annual REMP report, the groundwater monitoring program, and the annual effluent release report, which included a summary of the radioactive waste management and transportation programs.

The inspector reviewed surveillances of containment isolation as required by the TS. The inspector reviewed documents and interviewed personnel associated with TMI-2 to determine if issues were being appropriately identified and corrected in accordance with the site's CAP.

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 release and 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 determined that issues were being identified and entered into the CAP in a timely manner and the issues were effectively screened, prioritized and evaluated commensurate with their safety significance.

c. Conclusions

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

3.0 Exit Meeting Summary

On July 25, 2022, the inspector presented the inspection results to Frank Helin, Project Director, Energy Solutions, and Trevor Orth, Site Decommissioning Director, Constellation, and other members of TMI-2 Solutions and Constellation management and staff. No proprietary information was retained by the inspector or documented in this report.

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

F. Helin, Project Director
T. Devik, Manager, Nuclear Licensing
G. McCarty, Radiation Protection Manager
R. Newmaster, Sr. Project Manager
H. Pell, Licensing Engineer
G. Van Noordennen, Executive Consultant

Constellation

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

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 (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. 8, TMI-2 Reactor Building Unfiltered Leak Rate Test
2303-11.20A, Rev. 8, Operability Check of the TMI-2 Equipment Hatch Personnel Airlock Doors
2303-11.20B, Rev. 8, Operability Check of the TMI-2 Ante Room Personnel Airlock Doors
AR 04440698, 04452445, 04454002, 04478477, 04486321, 04487076
Audit NOSA-TMI-21-09, Three Mile Island Unit 2, October 11-21, 2021
Decommissioning Nuclear Safety Review Board, Three Mile Island Nuclear Generating Station
Unit 2, March 22, 2022, Meeting Minutes
ER-AA-200, Rev. 6, Preventive Maintenance Program
ES-TMI-CR-2021-0027, 0040; 2022-0002, 0008, 0014, 0026
Liquid Permit Post-Release Data, Permit Number: L-20220524-1098-B
MA-AA-716,230, Rev. 12, Predictive Maintenance Program
OP-2TM-2244-201, Rev 1, Verification of TMI-2 Containment Isolation
OP-2TM-2602-000, Rev 1, Unit 2 PDMS Alarm Monitoring System
PDMS Total Work Order Backlog Open as of the end of March 2022
Radiological Survey #: 2021-101360, 109443, 111490, 111638; 2022-115656, 116001
RWP TM-2-22-00201, 00202, 00203, 00204, 00205, 00206, 00208, 00209, TM-2-21-00215
TMI 2 2021 Exposure
TMI-2 Post Defueling Monitored Storage Safety Analysis Report, Update 14
TMI2-QA-AUD-2021-0001, Sept 13-16, 2021
TMI2-QA-PG-001, Rev. 19, Three Mile Island Unit 2 PDMS Quality Assurance Plan
Waste Manifest, Shipment Number 2021-0011
Waste Manifest, Shipment Number 2021-0012
Work Order 05263722-01, 2301-1 U2 PDMS Shift and Daily Checks, 06/05/22

LIST OF ACRONYMS USED

ADAMS	Agencywide Document and Access Management System
CAP	Corrective Action Program
CFR	<i>Code of Federal Regulations</i>
Constellation	Constellation Nuclear
GPO	Government Printing Office
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
REMP	Radiological Environmental Monitoring Program
SAR	Safety Analysis Report
TMI-2	Three Mile Island Station, Unit 2
TMI-2 Solutions	TMI-2 Solutions, LLC
TS	Technical Specifications