



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD, SUITE 102
KING OF PRUSSIA, PA 19406-1415

June 18, 2024

David P. Rhoades
Senior Vice President
Constellation Energy Generation, LLC
President and Chief Nuclear Officer
Constellation Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: CONSTELLATION ENERGY GENERATION, LLC, THREE MILE ISLAND
NUCLEAR STATION, UNIT 1 - NRC INSPECTION REPORT NO.
07200077/2024001

Dear David Rhoades:

On May 20, 2024, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection under Inspection Manual Chapter (IMC) 2690, "Inspection Program for Storage of Spent Reactor Fuel and Reactor Related Greater-Than- Class C Waste at Independent Spent Fuel Storage Installations and for 10 CFR Part 71 Transportation Packagings" of the spent fuel storage at the permanently shutdown Three Mile Island Nuclear Station, Unit 1 (TMI-1). 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 site personnel, a review of procedures and records, and a walk-down of the Independent Spent Fuel Storage Installation (ISFSI). The results of the inspection were discussed with Trevor Orth, Director Fleet Decommissioning, and other members of the TMI-1 staff on May 20, 2024, 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, 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).

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

Docket No.: 07200077
License No.: DPR-50

Enclosure:
Inspection Report No.: 07200077/2024001

cc w/ encl: Distribution via ListServ

SUBJECT: CONSTELLATION ENERGY GENERATION, LLC, THREE MILE ISLAND
NUCLEAR STATION, UNIT 1 - NRC INSPECTION REPORT NO.
07200077/2024001 DATED JUNE 18, 2024.

DOCUMENT NAME: <https://usnrc.sharepoint.com/teams/Region-I-Decommissioning-Branch/Inspection Reports/Inspection Reports - Final/TMI U1 ISFSI inspection 2024.docx>
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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No.: 07200077/2024001

Docket No: 07200077

License No.: DPR-50

Licensee: Constellation Energy Generation, LLC (Constellation)

Facility: Three Mile Island Nuclear Station, Unit 1 (TMI-1)

Location: Middletown, PA 17057

Inspection Dates: April 30, 2024, to May 20, 2024

Inspector: Stephen 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

Constellation Energy Generation, LLC
Three Mile Island Nuclear Station, Unit 1
NRC Inspection Report Nos. 07200077/2024001

A routine announced Independent Spent Fuel Storage Installation (ISFSI) inspection was completed on May 20, 2024, at the permanently shutdown Three Mile Island Station, Unit 1 (TMI-1). On-site inspection activities were conducted April 30-May 1, 2024. Additional inspection activities were conducted remotely (in-office reviews) during the inspection period. The inspection included a review of the radiation protection, fire protection, emergency preparedness, surveillance, maintenance, environmental monitoring, training, and corrective action programs. The inspection consisted of observations by the inspector, interviews with site personnel, a review of procedures and records, and a walk-down of the ISFSI. The NRC's program for overseeing the safe operation spent fuel storage is described in Inspection Manual Chapter (IMC) 2690, "Inspection Program for Storage of Spent Reactor Fuel and Reactor Related Greater-Than- Class C Waste at Independent Spent Fuel Storage Installations and for 10 CFR Part 71 Transportation Packagings.

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

1.0 Background

On September 26, 2019, Constellation sent a letter [Agency Documentation and Management System (ADAMS) Accession Number ML19269E480] to the NRC certifying the permanent cessation of power operation activities and certifying that the fuel had been permanently removed from the reactor vessel. On July 27, 2022, Constellation sent a letter (ML22208A093) certifying that all spent nuclear fuel assemblies had been permanently transferred from the spent fuel pool to the ISFSI.

2.0 ISFSI

a. Inspection Scope [Inspection Procedures (IP) 60855]

The inspector performed on-site ISFSI inspection April 30 – May 1, 2024, supplemented by in-office reviews of TMI-1 documentation related to the safe storage of spent fuel.

The inspector assessed whether Constellation personnel had been operating and maintaining ISFSI programs in conformance with the commitments and requirements contained in the Final Safety Analysis Report, Certificate of Compliance (CoC), Technical Specifications (TS), Quality Assurance Program (QAP), site procedures, and 10 CFR Part 72.

ISFSI facilities, located at sites where loading operations have been completed, are essentially passive operating facilities. The inspector's review was directed towards confirming the ongoing adequacy of the radiation protection, fire protection, emergency preparedness, surveillance, maintenance, environmental monitoring, training, QAP, and corrective action program.

The inspector observed personnel checking the inlet and outlet vents of the cask heat removal system, interviewed personnel, and reviewed records and procedures. The inspector also reviewed changes made to Constellation's programs and procedures since the last inspection to determine if changes were consistent with the license or CoC and did not reduce the effectiveness of the program.

b. Observations and Findings

The inspector determined that Constellation's plans and preparations for controlling radiological activities were effective and in compliance with 10 CFR Part 20 requirements. The inspector also verified that special nuclear material stored at the ISFSI was properly accounted for in accordance with regulatory requirements. The inspector verified all employees' radiological doses were below the regulatory dose limits. Additionally, the dose requirements for members of the public at the nearest accessible location to the ISFSI were within limits prescribed by 10 CFR 72.104.

The inspector determined daily checks of the inlet and outlet vents of the casks was performed by Constellation personnel in accordance with surveillance requirements in the TS. The inspector performed a tour of the ISFSI pad and did not note any significant material condition issues that would impact the performance of the pad and loaded casks. The inspector also verified that transient combustibles had not been stored on the ISFSI pad or in the vicinity of the casks and confirmed vehicle entry onto the ISFSI pad was controlled in accordance with site procedures.

c. Conclusions

No violations of more than minor safety significance were identified.

3.0 Exit Meeting Summary

On May 20, 2024, the inspector presented the inspection results to Trevor Orth, Director Fleet Decommissioning, and other members of Constellation's staff. No proprietary information was retained by the inspectors or documented in this report.

PARTIAL LIST OF PERSONS CONTACTED

T. Orth, Director Fleet Decommissioning
S. Minnick, Site Decommissioning Director (Acting)
M. Davoli, Armed Security Officer III
R. Fauntleroy, RP Technician
S. Fink, Site Project Management Lead
D. Gensamer, Armed Security Officer III
S. Magaro, Manager Site Security Operations
P. Mullins, Manager Engineering
J. Shrum, Supervisor, Radiation Protection
C. Smith, Regulatory Assurance Manager
B. Young, Manager Engineering

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Audits and Reports

NOSA-TMI-22-03, Independent Spent Fuel Storage Installation (ISFSI) Audit Report,
July 6, 2022
NOSA-TMI-23-01, Security Programs Audit Report, March 15, 2023
Three Mile Island Nuclear Station Units 1 and 2, Annual Radiological Environmental Operating
Report, April 2023
Three Mile Island Nuclear Station Units 1 and 2, Annual Radiological Environmental Operating
Report, April 2024
Three Mile Island Nuclear Station Unit 1, 10 CFR 72.212 Evaluation Report, Rev. 2
990-1745, Three Mile Island Unit No. 1, Permanently Defueled Fire Hazards Analysis Report,
Rev. 34
Three Mile Island Graded Exercise Report, 10/18/2023

Corrective Action Documents

AR – 4721425, 4734339, 4734874, 4763865, 4766704

Procedures and Programs

EP-TM-1002, Three Mile Island ISFSI Only Emergency Plan
NO-DC-10, Decommissioning Quality Assurance Program, Rev. 2
OU-AA-630-101, Dry Cask Storage/ISFSI Inspection Surveillance Program, Rev. 4
RP-AA-100, Conduct of Radiation Protection Operations, Rev. 7
RP-TM-907-0001, Annual ISFSI Radiological Survey, Rev. 1
SY-TM-1707, Security Operational Duties, Rev. 0
SY-TM-1707-F-03, Gates Patrol Checklist, Rev. 0

Miscellaneous

72.48 Screenings – TMI-72.28-048, 049, 050, 051, 052, 053
Certificate of Compliance, 72-1031, Amendment 9
ISFS Training Final - August 25, 2021
Radiological Surveys 2022-173841, 2023-202947
WO 05399893, Spent Fuel Storage Cask Inspection Checklist, 11/8/23, 11/9/23, 11/13/23
WO 05289988, ISFSI Pad, Cask Tip Over Zone, Haul Path, Inspection Checklist, 11/29/23

LIST OF ACRONYMS USED

ADAMS	Agency Documentation and Management System
CFR	<i>Code of Federal Regulations</i>
CoC	Certificate of Compliance
Constellation	Constellation Energy Generation, LLC
GPO	Government Printing Office
IMC	Inspection Manual Chapter
IP	Inspection Procedure
ISFSI	Independent Spent Fuel Storage Installation
NRC	U.S. Nuclear Regulatory Commission
QA	Quality Assurance
QAP	Quality Assurance Program
TMI-1	Three Mile Island Nuclear Station, Unit 1
TS	Technical Specifications