



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

January 5, 2021

Docket No. 07200077

License No. DPR-50

Mr. Trevor L. Orth
Site Decommissioning Director
Exelon Nuclear
Three Mile Island Unit 1
2625 River Road
Middletown, PA 17057

**SUBJECT: THREE MILE ISLAND NUCLEAR STATION, UNIT 1 – NRC INSPECTION
REPORT NO. 07200077/2020002**

Dear Mr. Orth:

On December 2, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the Three Mile Island Nuclear Station, Unit 1 Independent Spent Fuel Storage Installation (ISFSI) pre-operational activities. On-site inspections were performed on November 12-13, 2020. Additional inspection activities (in-office reviews via remote means) were conducted remotely as a consequence of the COVID-19 public health emergency (PHE) during the inspection period from May 4, 2020 to December 2, 2020. The inspectors examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, the conditions of your license, and the Certificate of Compliance. The results of this inspection were discussed with you and other members of your staff on December 10, 2020 and are documented in the enclosed report. No findings of safety significance were identified.

In accordance with 10 Code of Federal Regulations (CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter and 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 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

T. Orth

2

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 Elizabeth Andrews at 610-337-5117 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
Region 1

Docket No: 072-00077
License No: DPR-50

Enclosure: Inspection Report 07200077/2020002
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

THREE MILE ISLAND NUCLEAR STATION, UNIT 1 – NRC INSPECTION REPORT NO. 07200077/2020002 DATED JANUARY 5, 2021.

DOCUMENT NAME: G:\DIRHP\ISFSI\TMI\TMI Crane Report 2020002.docx

SUNSI Review Complete: EAndrews

ML21005A160

After declaring this document An Official Agency Record it will be released to the Public.

To receive a copy of this document, indicate in the box: **C** = Copy w/o attach/encl **E** = Copy w/ attach/encl **N** = No copy

OFFICE	DNMS/RI	N	DNMS/RI				
NAME	E.Andrews/ea		A.Dimitriadis/ad				
DATE	1/4/21		1/5/21				

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No: 072-00077

License No: DPR-50

Report No: 07200077/2020002

Licensee: Exelon Generation Co., LLC (Exelon)

Facility: Three Mile Island Nuclear Station, Unit 1

Location: Middletown, Pennsylvania

Dates: May 4, 2020 – December 2, 2020

Inspectors: E. Andrews, Health Physicist
S. Hammann, Senior Health Physicist
M. Henrion, Health Physicist
P. Koch, Structural Engineer
P. Patel, Structural Engineer
A. Rigato, Structural Engineer

Approved by: Anthony Dimitriadis, Chief
Decommissioning and ISFSI, and Reactor HP Branch
Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

Exelon Generation Company, LLC
Three Mile Island Nuclear Station, Unit 1
NRC Inspection Report No. 07200077/2020002

On December 2, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed onsite and remote inspections of the Three Mile Island Nuclear Station, Unit 1 (TMI-1) Independent Spent Fuel Storage Installation (ISFSI) pre-operational activities of dry cask storage. Onsite inspections were performed on November 12-13, 2020. Additional inspection activities (in-office reviews via remote means) were conducted as a consequence of the COVID-19 public health emergency (PHE) during the inspection period from May 4, 2020 to December 2, 2020. The inspection included a review of the structural analysis and observation of the crane to be used during ISFSI campaign at TMI-1. The inspection consisted of observations by the inspectors, interviews with site personnel, a review of procedures, calculations and records, and crane walk-downs. The NRC's program for overseeing the safe operation of dry storage of spent fuel at an ISFSI is described in Inspection Manual Chapter 2690, "Inspection Program for Dry Storage of Spent Reactor Fuel at Independent Spent Fuel Storage Installations and for 10 CFR Part 71 Transportation Packagings."

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

REPORT DETAILS

1.0 Independent Spent Fuel Storage Installation

1.1 Onsite Fabrication of Components and Construction of an ISFSI (60853)

a. Inspection Scope

The inspectors performed an in-office review of the recently installed 125-ton, single failure proof TMI-1 Fuel Handling Building crane, MIS-A-2B, to determine if it met the single failure proof criteria of NUREG 0554, "Single-Failure-Proof Cranes for Nuclear Power Plants" for use in dry cask storage operations. The inspectors reviewed and verified that the assumptions the licensee used in the analysis and design methodology were appropriate and complied with applicable standards consistent with recommendations of NUREG 0554 and NUREG 0612, "Control of Heavy Loads at Nuclear Power Plants," as appropriate.

Onsite inspection of the new crane was performed to determine the acceptability and readiness of the crane on November 12-13, 2020. The inspectors observed the crane as installed in the Fuel Handling Building area, the performance of the crane load tests using the site load test procedure, the involvement of Exelon and American Crane & Equipment Corporation personnel in the crane testing process, and operator and maintenance staff training on the crane controls. Additionally, the inspectors reviewed condition reports generated to assess if they had been properly evaluated and if appropriate actions taken. The crane factory test activities and site functional test procedure were reviewed by the inspectors to confirm their scope was adequate and to verify the crane capability, applicability, and extent of review by project engineering. During the crane load test, the inspectors noted the actual weights totaled the loading requirement for both the 100% and 125% load tests.

b. Findings

No findings of significance were identified.

2.0 Exit Meeting

The inspection results were discussed with Mr. Trevor Orth, Site Decommissioning Director, and other members of the Exelon staff, on December 10, 2020. No proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTARY INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

T. Orth, Site Decommissioning Director
R. Brady, TMI DO Regulatory Assurance Manager
S. Minnick, Senior Manager, Site Project Management
M. Menser, Lead Installation Representative
P. Mullens, Manager – ISFSI Engineering lead
R. Shacklett, ISFSI Project Manager
J. Troiano, Project Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Procedures

1406, Rev. 18, Crane Operator Qualifications
MA-AA-716-022, Rev. 14, Control of Heavy Loads Program
REP-21727-008 R2, Site Functional Test Procedure For 125/15/3 Ton TMI-1 Fuel Handling Building Crane
REP-21727-009 R1, Site Load Test Procedure For 125/15/3 Ton TMI-1 Fuel Handling Building Crane

Condition Reports

04327621 04341691 04367020 04371782 04373500

Miscellaneous

American Crane & Equipment Corp. Test Weight Verification and Calibration Logs
Book 22 – Fuel Handling Building Structural Design Book, Revision 00A
C-1101-114-007, Fuel Handling Building Replacement Crane – Structural Analyses – ISFSI, Revision 0
C-1101-114-008, Fuel Handling Building Replacement Crane – Mechanical Analyses – ISFSI, Revision 0
C-1101-114-009, Fuel Handling Building Crane Rail Analysis – ISFSI, Revision 0
DIR-21727-EE-001, Crane Electrical Load – Fuel Handling Building Replacement Crane ISFSI, Revision 0
EC 625307, ISFSI – Fuel Handling Building Crane Upgrade, Revision 0
SP-1101-12-173, TMI-1 Fuel Handling Building Single Failure Proof Crane, Revision 2

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access and Management System
CFR	Code of Federal Regulations
ISFSI	Independent Spent Fuel Storage Installation
NRC	U.S. Nuclear Regulatory Commission
PHE	public health emergency
TMI-1	Three Mile Island Nuclear Station, Unit 1