



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

June 9, 2022

EA-22-049

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

**SUBJECT: LIMERICK GENERATING STATION – INDEPENDENT SPENT FUEL
STORAGE INSTALLATION (ISFSI) NRC INSPECTION REPORT NO.
07200065/2021001 AND EXERCISE OF ENFORCEMENT DISCRETION**

Dear Mr. Rhoades:

On February 8, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the Limerick Generating Station (Limerick) Independent Spent Fuel Storage Installation (ISFSI) activities. On-site inspections were performed on August 16 - 20, 2021, September 9 - 15, 2021, September 21, 2021, and September 26 - October 2, 2021. Additional inspection activities (in office reviews via remote means) were conducted throughout the period as a consequence of the COVID-19 public health emergency. 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 (CoC). The inspection consisted of observations by the inspectors, interviews with site personnel, a review of procedures and records, and plant walkdowns. The results of this inspection were discussed with Mr. Frank Sturniolo, Site Vice President, and other members of your staff on May 31, 2022, and are documented in the enclosed report.

The inspectors identified a violation of 10 CFR 72.48 associated with tornado hazard protection. Because this violation was identified during the discretion period covered by Enforcement Guidance Memorandum 22-001, "Enforcement Discretion for Noncompliance of Tornado Hazard Protection requirements at Independent Spent Fuel Storage Installations," and because Constellation was implementing compensatory measures and has taken or plans to take the necessary actions to restore compliance, the NRC is exercising discretion by not issuing an enforcement action for the violation and is allowing continued ISFSI handling operations.

In accordance with Title 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 Web site at

<http://www.nrc.gov/reading-rm/adams.html>. You are not required to respond to this letter. However, if you choose to respond, 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 Web site 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).

Please contact Mark Henrion of my staff at 610-337-6968 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: 07200065

License Nos: NPF-39 and NPF-85

Enclosure: InspectionReport 07200065/2021001
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

SUBJECT: LIMERICK GENERATING STATION – INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI) NRC INSPECTION REPORT NO. 07200065/2021001 AND EXERCISE OF ENFORCEMENT DISCRETION DATED JUNE 9, 2022

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SUNSI Review Complete: MHenrion

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Inspection Report

Docket No: 072-00065

License Nos: NPF-39 and NPF-85

Report No: 07200065/2021001

Licensee: Constellation Energy Generation, LLC

Facility: Limerick Generating Station

Location: Sanatoga, PA 19464

Dates: August 16, 2021–February 8, 2022

Inspectors: E. Andrews, Health Physicist
B. DeBoer, Senior Health Physicist
A. Djapari, Transportation and Storage Safety Inspector
S. Hammann, Senior Health Physicist
M. Henrion, Health Physicist
J. Nicholson, Senior Health Physicist
P. Patel, Structural Engineer
R. Rodriguez, Structural Engineer
J. Tapp, Transportation and Storage Safety Inspector

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

Enclosure

EXECUTIVE SUMMARY

Constellation Energy Generation, LLC
Limerick Generating Station
NRC Inspection Report No. 07200065/2021001

On February 8, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the Independent Spent Fuel Storage Installation (ISFSI) activities at Limerick Generating Station. On-site inspections were performed for the 10 CFR 72.212(b) evaluation on August 16 – 20, 2021. On-site inspections were performed for dry run operations for transportation on September 9 – 15, 2021, and for spent fuel pool operations on September 21, 2021. An on-site inspection of the initial Holtec dry cask loading at Limerick was performed on September 26 – October 2, 2021. Additional inspection activities (in office reviews via remote means) were performed throughout this period as a consequence of the COVID-19 public health emergency, including the completion of the initial Holtec two cask loading campaign. The inspection consisted of observations by the inspectors, interviews with site personnel, a review of procedures and records, and plant 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 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.”

Enforcement Discretion

The inspectors identified a violation of 10 CFR 72.48 associated with tornado hazard protection. Because this violation was identified during the discretion period covered by Enforcement Guidance Memorandum 22-001, “Enforcement Discretion for Noncompliance of Tornado Hazard Protection requirements at Independent Spent Fuel Storage Installations,” and because the licensee was implementing compensatory measures and has taken or plans to take the necessary actions to restore compliance, the NRC is exercising discretion by not issuing an enforcement action for the violation and is allowing continued ISFSI handling operations.

REPORT DETAILS

1.0 Independent Spent Fuel Storage Installation

1.1 Background

Owner/Operator Constellation – Limerick Generating Station (Limerick), selected Holtec HI-STORM FW Cask System technology to allow spent nuclear fuel assemblies currently stored at Limerick’s spent fuel pool (SFP) to be relocated and stored using an ISFSI. The Holtec system is listed in 10 CFR 72.214, “List of Approved Spent Fuel Storage Casks,” under Certificate of Compliance (CoC) No. 1032. Holtec Final Safety Analysis Report (FSAR), Revision 4 applies to the Holtec ISFSI system that was placed in service under CoC number 1032.

1.2 Onsite Fabrication of Components and Construction of an ISFSI (IP 60853)

a. Inspection Scope

The ISFSI pads located at Limerick are composed of three independent pads. The Limerick ISFSI pad was designed to accommodate TN NUHOMS Horizontal Storage Modules (HSM). At the time of this inspection, 55 casks were stored in NUHOMS HSMs and placed on the Limerick ISFSI pads. Constellation plans to load up to 36 HI-STORM FW units alongside the existing HSMs. The inspectors reviewed the evaluations to ensure a demonstration of reasonable assurance that the ISFSI pad at Limerick complies with the requirements of 10 CFR 72.212(b)(5)(ii). The inspectors performed a review of the structural assessment of the ISFSI pad design review for static and dynamic loads associated with the new casks, as required by 10 CFR 72.212. In addition, the inspectors reviewed the site-specific tip over analysis of the HI-STORM FW storage cask and the soil structure interaction analysis performed for Limerick. The inspectors focused their review on completeness and accuracy of the information provided by Constellation and verified that the analysis and design methodology used for the additional HI-STORM casks on the Limerick ISFSI pad was consistent with the HI-STORM FW FSAR as well as applicable guidance in American Concrete Institute (ACI) 318-05, ACI 349-06, NUREG-1536 and NUREG-0800. The staff concluded that Constellation’s overall approach was reasonable, satisfied the requirements of 10 CFR 72.212(b)(5)(ii), and therefore provides a reasonable assurance of safety.

b. Findings

No violations of significance were identified.

1.3 Pre-operational Testing of an ISFSI (IP 60854)

a. Inspection Scope

The inspectors evaluated Constellation’s performance during NRC observed pre-operational dry run activities that were performed in order to fulfill requirements in the NRC-issued CoC No. 1032, Amendment 1, Revision 1 (CoC 1032-1R1). The inspectors observed Constellation’s dry run activities related to transportation operations and spent fuel pool operations at Limerick on September 9 – 15, 2021 and September 21, 2021, respectively.

During the dry run activities, the inspectors observed cask loading and cask movement activities to determine whether Constellation had developed the capability to properly load and move the multi-purpose canister (MPC) to be used in storage of spent fuel at Limerick. The inspectors observed: (a) movement of a dummy fuel assembly into the MPC, (b) movement of the MPC/HI-TRAC from the fuel pool to the cask processing area (c) stack-up and transfer of the MPC from the HI-TRAC to the HI-STORM (e) retrieval of the MPC from the HI-STORM back into the HI-TRAC, (f) installation of the HI-STORM lid, (g) lifting of the HI-STORM off the HI-PORT using the hydraulic lifting gantry (HLG), and (h) placement of the HI- STORM on the ISFSI pad using the Air Caster and Jacking system.

The inspectors attended select Constellation pre-job briefings to assess Constellation's ability to identify critical steps of the evolution, potential failure scenarios, and human performance tools to prevent errors. The inspectors reviewed the training program and training records of personnel assigned to ISFSI activities. The inspectors reviewed MPC loading, unloading, and processing procedures to determine if they contained commitments and requirements specified in the CoC, technical specifications (TSs), FSAR, and Title 10 of the CFR Part 72. The inspectors also reviewed Constellation's fuel selection procedures to ensure they appropriately incorporated the requirements in the TSs.

The inspectors reviewed radiation protection procedures and radiation work permits associated with the proposed ISFSI loading campaign. The inspectors also reviewed the radiological controls which would be established during an MPC loading campaign and reviewed corrective action reports associated with preparations for the ISFSI loading campaign to ensure that issues were being properly identified, prioritized, and evaluated commensurate with their safety significance.

b. Findings

No violations of significance were identified.

1.4 Operation of an ISFSI at Operating Plants (IP 60855)

a. Inspection Scope

From September 26 – October 2, 2021, the inspectors observed and evaluated Constellation's loading of the first MPC associated with its initial Holtec HI-STORM FW Cask System dry cask campaign on-site at Limerick. The inspectors also reviewed the licensee's planned activities associated with long-term operation and monitoring of the ISFSI. The inspectors evaluated compliance with the CoC, TSs, and station procedures.

The inspectors observed fuel assemblies being loaded into the MPC. The inspectors also observed MPC processing operations including welding, non-destructive weld examinations, hydrostatic testing, vacuum drying, helium backfill, and survey activities. The inspectors observed movement activities including stack-up, HLG operation, and placement of HI-STORM onto the Air Caster system. During performance of these activities, the inspectors verified that procedure use, communication, and coordination of ISFSI activities met established Constellation standards and requirements.

The inspectors reviewed Limerick's program associated with fuel characterization and selection for storage and reviewed the first cask fuel selection package to determine if

the licensee was loading fuel in accordance with the CoC, TSs, and procedures. Inspectors reviewed a recording made of the fuel assemblies loaded into the first MPC to ensure the loading was in accordance with Limerick's loading plan.

The inspectors observed radiation protection surveys and job coverage for the cask loading workers, and reviewed survey data maps and radiological records from the first MPC loading to determine if radiation survey levels measured were within limits specified by the TSs and consistent with values specified in the FSAR.

The inspectors reviewed corrective action reports and the associated follow-up actions that were generated since Limerick's dry run demonstrations, to ensure that issues were entered into the corrective action program (CAP), prioritized, and evaluated commensurate with their safety significance.

b. Findings

No violations of significance were identified.

1.5 Review of 10 CFR 72.212 (b) Evaluations (IP 60856)

a. Inspection Scope

Limerick is utilizing the Holtec International HI-STORM FW Cask System for the storage of spent fuel at the onsite ISFSI. The HI-STORM FW casks augment the Standardized NUHOMS casks already in service at the current ISFSI, which began operation in 2008.

The review of the HI-STORM FW Cask System was based on NRC-issued CoC 1032-1R1 and its associated Safety Evaluation Report (SER), and HI-STORM FW FSAR Revision 4. The review of the Part 50 facility site-specific parameters utilized the Updated Final Safety Analysis Report (UFSAR) and other applicable plant-specific design and licensing basis information.

The inspectors evaluated the licensee's compliance with the requirements of 10 CFR 72.212. The inspectors examined Constellation's written evaluations to determine if they were in accordance with 10 CFR 72.212(b)(5) and evaluated the conditions set forth in the CoC to determine if conditions had been met prior to use and if the radiological requirements of 72.104 were met. The inspectors examined applicable reactor site parameters, such as hypothetical fire and explosions, tornadoes, wind-generated missile impacts, seismic qualifications, lightning, flooding and temperature, to determine if they had been evaluated for acceptability with bounding values specified in the FSAR and the NRC SER. The inspectors also examined 50.59 evaluations associated with the construction and operation of the ISFSI and plant interfaces to determine if they were performed and to determine if changes to certain facility design bases and UFSAR commitments required NRC approval. The reactor emergency plan, quality assurance program, training program, and radiation protection program were reviewed to determine if there was a decrease in effectiveness and if changes made required prior NRC approval.

b. Findings

Description

The inspectors identified a violation of 10 CFR 72.48 associated with tornado hazard protection. 10 CFR 72.48(c)(2)(ii) requires, in part, that a general licensee shall request that the certificate holder obtain a CoC amendment pursuant to 10 CFR 72.244, prior to implementing a proposed change, if the change would result in more than a minimal increase in the likelihood of occurrence of a malfunction of a system, structure, or component (SSC) important to safety (ITS) previously evaluated in the FSAR. This requirement includes the configuration where the HI-STORM FW overpack is lifted by the hydraulic lifting gantry (HLG) as part of ISFSI operations. The HLG is an ITS component used in cask handling operations and is not designed to be operated in wind speeds exceeding 35 mph. The introduction of the ITS HLG met the criterion that resulted in “more than minimal increase” in the likelihood of occurrence of a malfunction of an SSC ITS previously evaluated in the FSAR. The general design criteria require ITS structures used in ISFSI operations to be designed to withstand the effects of tornado missiles and winds.

Enforcement

Because this violation was identified during the discretion period covered by Enforcement Guidance Memorandum 22-001, “Enforcement Discretion for Noncompliance of Tornado Hazard Protection requirements at Independent Spent Fuel Storage Installations,” and because the licensee was implementing compensatory measures and has taken or plans to take the necessary actions to restore compliance, the NRC is exercising discretion by not issuing an enforcement action for the violation and is allowing continued ISFSI handling operations.

2.0 Exit Meeting

On May 31, 2022, the inspectors presented the inspection results to Mr. Frank Sturniolo, Site Vice President, and other members of the Constellation staff who acknowledged the inspection results. No proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

F. Sturniolo	Site Vice President
S. Rafferty-Czincila	Licensing Director
J. Becka	Campaign Coordinator
M. Block	Senior Project Manager
B. Day	Mechanical Design Engineer
M. Cazzolli	Senior Manager Dry Cask Storage
D. Doran	Reactor Engineering
B. Levis	Operations Director
M. Arnao	Maintenance Director
M. Ajmera	Outage Manager
J. Sullivan	RP Manager
L. Velez	Engineering Lead Manager
D. Reddick	Corporate Licensing Director
J. Dougherty	Dry Cask Storage Program Manager
D. Fuller	Campaign Coordinator
J. Holiday	RP Supervisor
C. Jones	Cask Loading Supervisor
J. Kirkpatrick	ALARA Specialist
L. Lynch	Regulatory Assurance Manager
R. Owsley	Fuel Handling Supervisor
C. Wheeler	Regulatory Assurance

ITEMS OPENED, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Section 1.2 Onsite Fabrication of Components and Construction of an ISFSI (IP 60853)

Calculations

LC-0001, Exelon Nuclear, Limerick Generating Stations Units 1 & 2. Design and Evaluation of the Independent Spent Fuel Storage Installation (ISFSI) Facility Pad and Approach Aprons, Revision 0
LC-0033, "Limerick ISFSI Pad SSI Analysis and Structural Qualification" Revision 1
LIM-ISFI-2020-006, Limerick SSI Design Input for Holtec HI-STORM System, Revision 0
HI-2114830, Holtec Inter-national, Marlton, NJ, June 2015. Revision 4

Drawings

E-1010, Sheet 0001, Revision 17
E-1391, Sheet 0003, Revision 0
E-1391, Sheet 0004, Revision 0
E-1391, Sheet 0005, Revision 0
H. I. for Exelon-Limerick. Drawing No. 11467, Sheet. 1, Project No. 2844, General Arrangement, October 2018
N-00E-321-00005, Sheet 1, Revision 1

N-00E-321-00005, Sheet 2, Revision 1
 N-00E-321-00005, Sheet 3, Revision 1
 N-00E-321-00005, Sheet 4, Revision 1
 N-00E-321-00005, Sheet 5, Revision 1
 N-00E-321-00005, Sheet 6, Revision 1
 N-00E-321-00005, Sheet 7, Revision 1
 N-00E-321-00013, Sheet 1, Revision 0

Miscellaneous

Limerick 10 CFR 72.212 Evaluation Report, Revision 18
 RRTI-2844-005, Limerick Tip Over Analysis per EC627220, Revision 1
 Technical Report E-23336, Transnuclear, Inc. Design Requirements Document for the Basemat and Approach Slabs of an Independent Spent Fuel Storage Installation Site, Revision 1
 TODI LIM-ISFSI-2020-003, Rev. 0.
 Washington Group International, Inc. Independent Spent Fuel Storage Installation (ISFSI) Geotechnical Report. Technical Report Project No. LIM0089, October 2005

Section 1.3 Preoperational Testing of an ISFSI (IP 60854)

Procedures

HPP-2844-090, Equipment Mobilization and Preparation at Limerick Generating Station, Draft B
 HPP-2844-0100, MPC Pre-Operation Inspection at Limerick Generating Station, Draft C
 HPP-2844-0200, MPC Loading at Limerick Generating Station, Draft C
 HPP-2844-0300, MPC Processing at Limerick Generating Station, Draft C
 HPP-2844-0300, MPC Processing at Limerick Generating Station, Draft
 HPP-2844-0400, MPC Stack-up and Transfer at Limerick Generating Station, Draft
 HPP-2844-0500, HI-STORM Operations and Transport at Limerick Generating Station, Draft
 HPP-2844-0600, MPC Unloading, Draft
 HPP-2844-0700, Response to Abnormal Condition, Draft C
 HPP-2844-0800, Ambient Temperature Monitoring at Limerick Generating Station, Draft A

Section 1.4 Operation of an ISFSI at Operating Plants (IP 60855)

Corrective Action Issue Reports (IRs)

4295016	4304786	4323347	4349378	4361083	4361618	4378783
4378788	4384253	4387926	4395126	4410962	4422284	4438489
4439286	4439644	4441688	4446175	4446280	4456141	4456167
4494731						

Miscellaneous

ALARA Plan 21-105, Limerick Refuel Floor – 2021 ISFSI Campaign
 EC 632659, 2020 ISFSI Campaign (POST CAMPAIGN EC), dated November 12, 2020
 FCR30951044-R1, identified date September 29, 2021
 LG-21-107, Notification of the use of a new General License for Spent Fuel Storage for the LGS, dated November 4, 2021
 LISFSI-0046, Fuel Selection Packages LIM-0056 to LIM-0058 for Limerick 2021 Campaign – ISFSI, Revision 0
 Radiological Survey 2020-078856, ISFSI Pad, dated September 1, 2020
 RWP #LG-0-21-0204, ALARA Plan # 21-105, Limerick Refuel Floor- 2021 ISFSI Campaign

Procedures

GQP – 9.2, High Temperature Liquid Penetrant Examination and Acceptance Standards for Welds, Base Materials and Cladding (50° – 350° F), Revision 0

GQP – 9.6, Visual Examination of Welds, Revision 0
HPP-2844-0200, MPC Loading at Limerick Generating Station, Revision 2
HPP-2844-0300, MPC Processing at Limerick Generating Station, Revision 0
HPP-2844-0300, MPC Processing at Limerick Generating Station, Revision 1
HPP-2844-0400, MPC Stack-up and Transfer at Limerick Generating Station, Revision 0
HPP-2844-0500, HI-STORM Operations and Transport at Limerick Generating Station, Revision 0
HPP-2844-0600, MPC Unloading, Revision 0
HPP-2844-0700, Response to Abnormal Condition, Revision 0
HPP-2844-0800, Ambient Temperature Monitoring at Limerick Generating Station, Revision 0
PI-CNSTR-OP-HLTC-H-01, Closure Welding of Holtec Multi-Purpose Canisters – HI-STORM 100, HI-STAR 100, HI-STORM FW & UMAX Systems, Revision 4
RP-AA-210, Dosimetry Issue, Usage and Control, Revision 31
RP-AA-210-1001, Dosimetry Logs and Forms, Revision 14
RP-AA-305, Holtec HI-TRAC Radiation Survey, Revision 7
RP-AA-306, Holtec HI-STORM Radiation Survey, Revision 5

Section 1.5 Review of 10 CFR 72.212 (b) Evaluations (IP 60856)

10 CFR 50.59 and 10 CFR 72.48 Screenings/Evaluations

LGI-2020S001, Limerick ISFSI Pad SSI and Structural Qualification Re-Analysis, Revision 0
LGI-2020S007, ISFSI Temperature Monitoring System for HI-STORM FW, Revision 0
LGI-2020S009, Holtec HI-STORM FW Dry Cask Storage System – Licensing & Operations 72.48 Review, Revision 2
LGI-2021S001, Holtec HI-STORM FW Dry Cask Storage System – Licensing & Operations 50.59 Review, Revision 0
LGI-2021S002, Dry Cask Storage – ISFSI Inspection Surveillance Program 72.48 Review, Revision 0
Holtec 72.48 #1505, Revision 2
Holtec 72.48 #1540, Revision 0

Calculations

HI-2135869, Site-Specific Tornado Missile Analysis for HI-STORM FW System, Revision 11
HI-2188427, Limerick Haul Path Underground Utility Evaluation, Revision 1
HI-2188467, Seismic Stability Analysis of Stack-Up at Limerick, Revision 6
HI-2188483, Structural Analysis of Lifting of HI-STORM FW Through Jacking Arrangement, Revision 1
HI-2188601, Structural Analysis of the LGS Railroad Bay Floor Slab During Stack-Up, Revision 5
HI-2188735, Thermal Evaluation of HI-TRAC VW with MPC-89 in Cask Processing Area at LGS, Revision 0
HI-2200116, HI-STORM FW Fire Thermal Evaluation for Limerick, Revision 1
HI-2200127, Limerick Generating Station HI-STORM FW System ISFSI Site Boundary Dose Rates and Dose vs. Distance Calculations, Revision 0
HI-2200128, HI-STORM FW and HI-TRAC VW CoC Radiation Protection Program Dose Rate Limits for Limerick Generating Station, Revision 0
HI-2200177, Seismic Stability Analysis of HI-STORM on HI-PORT at LGS, Revisions 1 and 2
HI-2200220, Limerick Generating Station HI-STORM FW System ISFSI On-site Doses, Revision 0
HI-2200418, Seismic Analysis of HI-TRAC VW in the Cask Loading Pit Area at Limerick, Revisions 0 and 1
HI-2200425, Seismic Stability Analysis of the HI-TRAC Loaded with MPC in Cask Processing Area, Revision 0
HI-2200693, Evaluation of Plant Hazards at Limerick Generating Station, Revision 3
HI-2200822, Underground Utility Evaluation from Fabrication Pad to ISFSI Pad, Revision 2
HI-2210526, Stability Analysis of the HI-STORM FW under Tornado Missiles Impact, Revision 3
LM-0664, Effects of Local Intense Precipitation, Revision 4

Corrective Action Issue Reports (IRs)

4446280

Miscellaneous

DOC-104-760-215R0, Hydraulic Lifting Gantry for Limerick, dated July 13, 2021

DS-481, Holtec Dry Storage Position Paper, Consideration of Transient Loadings during Short Term Operations

Drawing No. 11524, HI-TRAC VW (For Use with 190 ½" MPC-89, Reduced Bottom Flange), Revision 5

Drawing No. SK-C-378, Sheet No. 4, Site Plan Flooding Control Areas, Revision 3

EC 627220, Holtec ISFSI Transition: Licensing & Operations Package, Revision 3

EC 630973, Holtec Transition – ISFSI Pad HLG at LGS, Revision 0

Final Safety Analysis Report on the HI-STORM FW MPC Storage System, Holtec Report No. HI-2114830, Revision 4

Limerick Generating Station, 10 CFR 72.212 Evaluation Report for the HI-STORM FW MPC Storage System, Docket 72-65, September 2021, Revision 0

LMS Supervisor Matrix Report for Joseph Dougherty, dated 8/12/2021

MTR 0328-97, Mating Device Downloader Attachment Load Test Results, Revision 0

MTR 0872-61, HI-TRAC VW Lift Yoke/Lift Lugs Load Test Results, Revision 0

MTR 0872-67, HI-TRAC VW Lift Yoke/Lift Lugs Load Test Results, Revision 0

PS-3106, Purchase Specification for HI-STORM FW Lifting Jacks, Revision 2

PT 0328-16, Mating Device Load Test, Dye Penetrant Test, Revision 0

RRTI-2844-005, Revisions 1 and 2

RRTI-2844-007, Revision 3

RRTI-2844-009, Revision 1

RRTI-2844-011, Revision 1

RRTI-2844-017, Revision 1

TODI LIM-ISFSI-2019-020, Revision 0

TODI LIM-ISFSI-2019-023, Revision 0

VT 0328-16, Mating Device Load Test, Direct Visual, Revision 0

Procedures

EP-AA-1008 Addendum 3, Emergency Action Levels for Limerick Generating Station, Revision 6

LS-AA-108, Exelon 10 CFR 72.212 Evaluation Report Update Procedure, Revision 5

LS-AA-114, Exelon 72.48 Review Process, Revision 4

LIST OF ACRONYMS USED

ACI	American Concrete Institute
CAP	Corrective Action Program
CoC	Certificate of Compliance
CoC 1032-1R1	CoC No. 1032, Amendment 1, Revision 1
CFR	Code of Federal Regulations
Constellation	Constellation Energy Generation, LLC
EC	Engineering Change
FSAR	Final Safety Analysis Report
HLG	Hydraulic Lifting Gantry
HSM	Horizontal Storage Module
IMC	Inspection Manual Chapter
ISFSI	Independent Spent Fuel Storage Installation
ITS	Important-to-Safety
Limerick	Limerick Generating Station
MPC	Multipurpose Canister

NCV	Non-Cited Violation
No.	Number
NRC	U.S. Nuclear Regulatory Commission
Overpack	HI-STORM FW overpack
SER	Safety Evaluation Report
SFP	Spent Fuel Pool
SSC	Systems, Structures and Components
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report