



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 16, 2021

Mr. Pierre Paul Oneid
Senior Vice President
and Chief Nuclear Officer
Holtec International
Krishna P. Singh Technology Campus
1 Holtec Blvd.
Camden NJ 08104

Ms. Jean A. Fleming
Vice President, Regulatory and
Environmental Affairs
Holtec Decommissioning International, LLC
Krishna P. Singh Technology Campus
1 Holtec Blvd.
Camden NJ 08104

SUBJECT: INDIAN POINT NUCLEAR GENERATING STATION, UNIT NO. 3 –
REGULATORY AUDIT SUMMARY CONCERNING THE LICENSE
AMENDMENT REQUEST FOR THE INSTALLATION AND USE OF A
NEW AUXILIARY LIFTING DEVICE (EPID L-2020-LLA-0051)

Dear Mr. Oneid and Ms. Fleming:

By letter dated March 24, 2020, as supplemented by letters dated October 2, 2020, November 9, 2020, February 26, 2021, and May 20, 2021, Entergy Nuclear Operations, Inc., the licensee at the time, submitted a license amendment request (LAR) for Indian Point Nuclear Generating Station, Unit No. 3 (Indian Point 3). In its LAR, the licensee proposed changes to the current licensing basis in the updated final safety analysis report with regard to the installation and use of a new single failure-proof auxiliary lifting device in the Indian Point 3 fuel storage building. On May 28, 2021, Holtec Decommissioning International, LLC (HDI) became the licensee for Indian Point 3.

To support its review, the U.S. Nuclear Regulatory Commission (NRC) staff conducted a regulatory audit of supporting documents from August 26, 2021, to December 2, 2021. The staff audited the requested documents to confirm certain information relied upon in the license amendment request. A summary of the regulatory audit is enclosed.

The NRC staff identified the need for additional information related to the topic of the audit. Separate correspondence containing a request for additional information was transmitted to Ms. Andrea Sterdis on December 3, 2021.

If you have any questions, please contact me at 301-415-1030 or by e-mail to Richard.Guzman@nrc.gov.

Sincerely,

/RA/

Richard V. Guzman, Senior Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-286

Enclosure:
Audit Summary

cc: Listserv

REGULATORY AUDIT SUMMARY
CONCERNING THE LICENSE AMENDMENT REQUEST
FOR THE INSTALLATION AND USE OF A NEW AUXILIARY LIFTING DEVICE
HOLTEC DECOMMISSIONING INTERNATIONAL, LLC
INDIAN POINT NUCLEAR GENERATING UNIT NO. 3

DOCKET NO. 50-286

EPID L-2020-LLA-0051

1.0 BACKGROUND

By letter dated March 24, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20084U773), Entergy Nuclear Operations, Inc., (Entergy, at the time, the licensee) submitted a license amendment request (LAR) to revise the Indian Point Nuclear Generating Unit No. 3 (IP3) licensing basis for spent fuel cask handling. Specifically, the licensee requested approval to incorporate into the IP3 Licensing Basis the installation and use of a new single failure-proof auxiliary lifting device (i.e., the Holtec International (Holtec) HI-LIFT) to handle a dry cask storage transfer cask (i.e., the HI-TRAC) in the IP3 fuel storage building. The change to the IP3 licensing basis would be documented in a revision to the IP3 updated final safety analysis report.

In a response to a request for additional information (RAI) dated May 20, 2021 (ADAMS Accession No. ML21140A451), Entergy provided information regarding thresholds of safe operation and mitigation measures that challenged the staff's understanding regarding how certain proposed HI-LIFT design criteria would be met. Specifically, the LAR stated that operator action could place the HI-LIFT frame in a stable configuration following seal leakage or control system problems, but the limits of safe operation for uneven HI-LIFT cylinder positions and specified acceptable seal leakage rates suggested insufficient time would be available to implement those actions if hydraulic power was lost. Furthermore, the LAR also indicated that the hydraulic system and controls were not important to safety because the HI-LIFT would lock following actuation of an emergency stop, but the response to the RAI information indicated that certain control system functions would be necessary to alert operators to adverse conditions and control the cylinder positions within safe limits.

On May 28, 2021, Holtec Decommissioning International, LLC (HDI) became the licensee for Indian Point 3. The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the licensee's application and RAI response dated May 20, 2021, and questioned whether the proposed inspection and preventive maintenance program, control system design, and operator response would be adequate to provide appropriate protection against credible equipment failures that could cause established threshold limits to be exceeded and, thereby, potentially result in damage to irradiated fuel during handling. To resolve these concerns, the staff determined a regulatory audit would assist in the timely completion of the LAR review. The audit was

Enclosure

conducted in accordance with the audit plan dated August 26, 2021 (ADAMS Accession No. ML21231A182), and consistent with NRC Office of Nuclear Reactor Regulation Office Instruction LIC-111, Revision 1, "Regulatory Audits," dated October 31, 2019 (ADAMS Accession No. ML19226A274).

2.0 AUDIT DATES AND LOCATION

The regulatory audit was conducted via a read-only internet portal established by the licensee from August 26, 2021 to December 2, 2021. The NRC staff could not download, print, or otherwise take possession of the information provided via the portal.

3.0 AUDIT ACTIVITIES

The purpose of the audit was to (1) gain a more detailed understanding of the licensee's evaluations supporting the subject LAR, (2) identify any additional information that the licensee would need to submit on the docket to enable the NRC staff to reach a licensing decision, and (3) establish an understanding of the supporting details to allow the NRC staff to issue clear requests for additional information (RAIs) and for the licensee to provide timely and complete RAI responses.

As part of the audit plan issued on August 26, 2021, the NRC staff requested the licensee to have the following informational items available and accessible via the internet portal:

- Analyses of the HI-LIFT structure used to determine acceptable deformation and the safe limits of operation.
- Information related to important to safety functions of the (1) hydraulic swing cylinders; (2) hydraulic power system for movement of the swing cylinders, including power supply if appropriate; (3) control system for positioning swing cylinders; and (4) instrumentation and actuation systems necessary to place the HI-LIFT in a safe state following credible malfunctions of the hydraulic control system:
 - a. System/component descriptions or purchase specifications, including identification of important to safety functions.
 - b. Drawings of components and systems showing attributes essential to performance of identified important to safety functions.
 - c. Plans for qualification of the components/systems credited with performing important to safety functions, including high-level acceptance criteria necessary to demonstrate quality commensurate with the importance to safety.
- Technical basis for scope of testing and associated acceptance criteria applied to hydraulic seals and valves performing important to safety functions related to the hydraulic cylinders.
- Analysis determining the time available for operator actions to place the HI-LIFT in a safe configuration following credible failures affecting the hydraulic swing cylinders.
- Plans to place the HI-LIFT in a safe configuration following credible failures of the hydraulic cylinder seals, hydraulic power system, and hydraulic control system (i.e., any instrumentation necessary to alert operators to a hydraulic system problem, necessary operator actions, locations where operator actions would be performed, and equipment

such as man-lifts or pre-staged scaffolding necessary to support the operator actions in a timely fashion).

The licensee provided the following supporting documentation for NRC staff review via the internet portal:

- HI-2188625, Structural Evaluation of HI-LIFT Device and Spent Fuel Building Walls at Indian Point 3 (Proprietary)
- Hydraulic Power System Drawing (Proprietary)
- Swing Arm Cylinder Drawing (Proprietary)
- Operating Procedure HPP-2880-7, HI-LIFT Swing Motion Off-Normal Operations (Proprietary)
- PS-2880-0003, Purchase Specification for the Indian Point Unit 3 HI-LIFT Hydraulic Cylinders (Proprietary)
- PS-2880-0017, Purchase Specification for the Indian Point Unit 3 HI-LIFT Protection Control System (Proprietary)
- Failure Modes and Effects Analysis for HI-LIFT Mechanical and Control Systems (Proprietary)

The NRC staff conducted audio/video teleconferences with the licensee on September 13, October 27, and November 16, 2021. During the teleconferences, the licensee responded to the NRC staff's questions, clarified various elements of the supporting component/system drawings, design evaluation and failure modes and effects analysis reports, and explained how the proposed updates to the applicable reports would address the staff's informational needs to support the proposed licensing action.

4.0 RESULTS OF THE AUDIT

The NRC staff did not make any regulatory decisions regarding the LAR under staff review. As an outcome of the audit, the staff was able to gain understanding, verify information, and identify the necessary information to be submitted on the docket by HDI to support the staff's technical basis for its licensing decision and to close out the regulatory audit. By email dated December 3, 2021 (ADAMS Accession No. ML21337A295), the NRC staff issued an RAI as a result of the audit review.

5.0 AUDIT PARTICIPANTS

NRC Participants from the Office of Nuclear Reactor Regulation

- S. Jones, Containment and Plant Systems Branch (SCPB)
- I. Tseng, Mechanical Engineering and Inservice Testing Branch (EMIB)
- B. Lehman, Structural, Civil, Geotech Engineering Branch (ESEB)
- A. Istar, Structural, Civil, Geotech Engineering Branch (ESEB)
- R. Guzman, Plant Licensing Branch 1 (LPL1)

Licensee and Contractor Participants

- A. Sterdis, Vice President, Regulatory and Environmental Affairs
- R. Burroni, HDI Site Vice President
- M. Johnson, Regulatory Assurance Manager
- C. Pelkola, Technical Support, Project Design Team
- J. Griffiths, Technical Support, Project Design Team
- M. Naylor, Technical Support, Project Design Team
- J. Cascio, Technical Support, Project Design Team
- P. Gowda, Technical Support, Project Design Team
- T. Gado, Project Manager/Technical Support

6.0 EXIT BRIEFING

On December 2, 2021, Richard Guzman of the NRC informed Andrea Sterdis of HDI, via telephone, that the NRC staff did not need to review any additional evaluations or design reports and, accordingly, the audit was concluded.

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 DATED DECEMBER 16, 2021

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ADAMS Accession No.: ML21346A000

OFFICE	NRR/DORL/LPL1/PM	NRR/DORL/LPL1/LA	NRR/DSS/SCP/BC(A)
NAME	RGuzman	KEntz	SJones
DATE	12/13/2021	12/13/2021	12/13/2021
OFFICE	NRR/DORL/LPL1/BC	NRR/DORL/LPL1/PM	
NAME	JDanna	RGuzman	
DATE	12/16/2021	12/16/2021	

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