



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

March 3, 2020

LICENSEE: Entergy Nuclear Operations, Inc.

FACILITY: Indian Point Nuclear Generating Unit No. 3

SUBJECT: SUMMARY OF JANUARY 16, 2020, PARTIALLY CLOSED PRESUBMITTAL MEETING WITH ENTERGY NUCLEAR OPERATIONS, INC. TO DISCUSS PROPOSED LICENSE AMENDMENT REQUEST TO REPLACE THE INDIAN POINT UNIT NO. 3 CRANE WITH A NEW HOLTEC HI-LIFT CRANE SYSTEM (EPID L-2019-LRM-0094)

On January 16, 2020, a Category 1 partially closed public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff, representatives of Entergy Nuclear Operations, Inc. (Entergy, the licensee), and Holtec International (Holtec) regarding a planned license amendment request (LAR) for Indian Point Nuclear Generating Unit 3 (Indian Point 3). The meeting notice and agenda, dated January 2, 2020, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML20015A007. The licensee provided a public version of its presentation, which is available at ADAMS Accession No. ML20008D393. A list of attendees is enclosed.

The purpose of the meeting was to discuss Entergy's planned LAR proposing to replace the Indian Point 3 Fuel Storage Building crane with a new Holtec auxiliary lifting device (hereafter referred to as the HI-LIFT crane or system). The licensee explained that it would (1) present information on the design, operation, and qualification of the HI-LIFT system to be installed at Indian Point 3 to facilitate improved handling of dry cask storage transfer casks; (2) describe its planned submittal necessary to implement the HI-LIFT system; and (3) solicit feedback from the NRC staff prior to submitting the LAR to facilitate a more efficient NRC staff review.

The licensee indicated that the LAR will be similar to the application submitted by Pacific Gas and Electric for Humboldt Bay Power Plant, Unit No. 3.¹ Entergy's LAR will not propose any changes to the Indian Point 3 Technical Specifications. The licensee is projecting the submission of the LAR in March 2020 and plans to request NRC approval of the amendment by the second quarter of 2021 in support of the projected start of fabrication and construction of the HI-LIFT system in the fourth quarter of 2021.

¹ Presubmittal meeting with NRC on April 20, 2004 (ADAMS Accession No. ML041190142).

Current Dry Cask Loading at Indian Point Energy Center

The licensee provided an overview of the current process for dry cask loading of Unit 3 spent fuel at Indian Point. Spent fuel is moved from the Unit 3 spent fuel pool to the Unit 2 spent fuel pool using a shielded transfer canister inside a transfer cask (HI-TRAC 100D, or HI-TRAC cask). The licensee noted that Indian Point is the only licensee in the country that transfers spent fuel from one spent fuel pool to another spent fuel pool prior to loading the spent fuel into a storage cask, which Entergy considers to be a highly inefficient process.

First, a shielded transfer canister is loaded with eight fuel assemblies in the Unit 3 spent fuel pool using the Unit 3 Fuel Storage Building 40-ton crane. The shielded transfer canister is then lifted from the spent fuel pool and lowered into the HI-TRAC cask, which is the outer cask. The loaded HI-TRAC cask is transported to the Unit 2 Fuel Storage Building using a vertical cask transport.

At Unit 2, the shielded transfer canister is then lifted from the HI-TRAC cask and lowered into the Unit 2 spent fuel pool using the Unit 2 Fuel Storage Building 110-ton crane. The fuel assemblies are then unloaded from the shielded transfer canister and placed in spare racks in the Unit 2 spent fuel pool. Following the transfer of 32 fuel assemblies from Unit 3 to Unit 2, the fuel assemblies are loaded into a multi-purpose canister, which is placed inside a HI-TRAC cask. The loaded HI-TRAC cask is then transferred to the Unit 2 truck bay for the closure process, and eventually to the Independent Spent Fuel Storage Installation (ISFSI) pad for storage.

Dry Cask Loading at Indian Point 3 Using the HI-LIFT System

Entergy proposes to use the HI-LIFT system to directly load the multi-purpose canister and HI-TRAC cask with Unit 3 fuel in the Unit 3 spent fuel pool, without first transferring the fuel to the Unit 2 spent fuel pool. The fuel assemblies will be loaded into a multi-purpose canister inside of a HI-TRAC cask in the Unit 3 spent fuel pool, and then the HI-LIFT system will be used to remove the loaded HI-TRAC cask from the Unit 3 spent fuel pool and transfer it to the Unit 3 truck bay for closure. The loaded HI-TRAC cask will then be moved to the ISFSI pad. This process is expected to take approximately 18-24 hours.

Entergy stated that the benefits of the proposed HI-LIFT system versus the current process include the following:

- The licensee will have direct loading capability of the fuel into the multi-purpose canister and HI-TRAC cask at the Unit 3 spent fuel pool.
- The use of the HI-LIFT system will result in a reduced number of fuel handling movements. The current method of three load movements per cask takes approximately 2 weeks to complete, whereas the HI-LIFT method will take one load movement per cask. This will also result in reduced potential for loading errors.
- The application of the HI-LIFT system results in a time reduction in transferring Unit 3 fuel. The existing process will take approximately 12 years longer to remove all spent fuel from the Unit 3 spent fuel pool.

- A dose reduction of approximately 50 millirem per wet transfer for a minimum of 100 wet transfers would yield a total estimated dose reduction of 5 rem.

HI-LIFT Design

The licensee stated that the HI-LIFT design is a custom designed lifting device to handle empty and fully loaded HI-TRAC casks, which was previously licensed by the NRC for use at Humboldt Bay Power Plant, Unit No. 3.

The HI-LIFT has a rated capacity of 100 tons; the licensee stated that the HI-LIFT would be tested to 125 percent of its capacity. The weight of a fully loaded HI-TRAC cask is approximately 97 tons. The licensee stated the HI-LIFT meets all applicable requirements of the American Society of Mechanical Engineers (ASME) Rules for Construction of Overhead and Gantry Cranes (NOG-1) to ensure all safety requirements are met during operation.

During the proprietary portion of the meeting, Holtec representatives provided detailed information on the structural design and operational features of the HI-LIFT crane, including:

- crane design configuration and cask transfer handling and operations
- structural support, reinforcement, and stabilizer design of the HI-LIFT system
- connections to the Unit 3 Fuel Storage Building
- proposed modifications to existing building components and systems
- testing, design, and lifting compliance with respect to the NOG-1 requirements
- structural analysis of the HI-LIFT system

Comments from NRC Staff

In reference to the licensee's statement regarding the precedent submittal for Humboldt Bay Power Plant, Unit No. 3, the NRC staff indicated that its review consideration for the precedent application was based, in part, on lower heat loads for Humboldt Bay Power Plant, Unit No. 3 older fuel. The staff expects that the fuel for Indian Point would have higher heat loads and should be considered accordingly in the licensee's associated analysis supporting the proposed transfer cask handling system. The licensee acknowledged the NRC staff's comments and the need to address any cask loading limitations as appropriate in its submittal. The licensee also provided clarification that the proposed amendment will be submitted under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, under which the subject transfer casks to be handled by the new lifting device are currently licensed.

The NRC staff had several questions for the licensee and Holtec specific to the HI-LIFT crane involving load cases, mechanical and structural components, lateral supports, stabilizing arms, load cases, dimensions of the system, and seismic analysis methodology. The licensee understood the questions and stated it intends to address the areas as appropriate in the submittal and will include information to demonstrate how the proposed crane will comply with applicable regulatory criteria and guidance.

Public Comments

There were no comments or questions made by the participants attending by teleconference during the open question and answer period of the meeting. (See discussion below.)

Follow-up Comments from the State of New York

By letter dated February 3, 2020,² the State of New York (NYS) provided comments to the meeting. The stated concerns and the NRC staff's responses to the concerns are as follows:

NYS:

New York State was provided the meeting slides in advance, eight of twenty-eight of which were redacted, and marked "PROPRIETARY INFORMATION WITHHELD PER 10 CFR 2.390." Your meeting announcement listed both proprietary and safeguards as reasons for closing the meeting. On January 3, the day after receipt of the meeting notice, I requested access to the unredacted information, noting that the State is allowed access to Safeguards and that the licensee has the ability to allow the State access to proprietary information. You advised that we speak with the licensees directly and conducted the public meeting though nearly 1/3 of the slides were unavailable to members of the public. State personnel from multiple agencies attended the meeting by webinar.

NRC staff response:

As stated during the meeting introduction, the reason for closing the meeting was to discuss information in the licensee's presentation slides that was determined to contain proprietary information. The NRC staff notes that the reference to safeguards information is default wording in the NRC's Public Meeting Notification System for partially closed meeting notices and that this default wording is not always specifically applicable to every public meeting.

NYS:

The meeting was scheduled from 10 - 11:30 am, and it was our understanding that the presentation would be given in its entirety except for the redacted slides. Entergy presented slides 1-8 and several NRC staff asked questions. Then, roughly thirty-five minutes into the meeting, at slide eight of the twenty-eight slide presentation, you asked if there were any questions on the phone. The operator responded that there were no questions; hearing none, you began to wrap up the public portion of the meeting, stating that the line would be cut-off and the remainder of the meeting would take place off-line. Before the presentation began, New York State Department of Public Service (DPS) staff had contacted the operator to ask that all participants speak into the microphone. The NRC operator acknowledged DPS staff and later made the request to the group. At

² Peterson, Alyse, New York State Energy Research and Development Authority, to Guzman, Richard, U.S. NRC, "Partially Closed Meeting with Entergy Operations, Inc. and Holtec International to Discuss License Amendment Request to Replace the Indian Point Nuclear Generating Unit No. 3 Fuel Handling Building Crane," dated February 3, 2020 (ADAMS Accession No. ML20054K163).

the time of your call for questions, DPS staff pressed *1 and recorded a question with the operator. As soon as DPS staff returned to the call, the public portion of the call was disconnected. The question from DPS staff was not addressed.

NRC staff response:

The NRC project manager (PM) understands that the licensee stated it had concluded its intended open portion of the presentation, which prompted the PM to transition to the public question and answer period. In light of the stated NYS concerns, the PM acknowledges, in retrospect, that the open portion of the meeting could have been extended to include subsequent presentation slides that were not marked as proprietary. The PM has discussed this with the licensee and will consider the appropriate measures to ensure optimum information exchange in the future. Regarding the stated premature disconnection of the phone line, the PM verified with the conference line operator after the call that there were no functional discrepancies with the conference line. For future meetings, the PM will consider a second confirmation check with the meeting operator before announcing the intention to adjourn the open portion of the meeting. The PM has offered a follow-up discussion with the DPS staff if desired to cover any comments or questions that were not addressed.

NYS:

The New York State Energy Research and Development Authority [NYSERDA] is endeavoring to obtain unredacted slides from the proposed licensee, and we question the NRC's application of proprietary protections to this public presentation. However, we note that the public meeting did not address the costs of the new HI-LIFT system, the relevant source of funds, the timeline for the crane installation and operation, and other basic and salient factors that would enable New York, a host state whose agencies and personnel are actively engaged in reviewing the License Transfer Application (LTA) for this site concurrently with the materials made public to date regarding this upcoming license Amendment Request, to adequately review this proposal. The HI-LIFT system is directly related to ongoing decommissioning funding, staffing, and operational questions under review in the LTA proceeding. As such, it was disappointing, and prohibitive of the robust public engagement to which the NRC has stated it is committed, to see a public meeting at this facility given such brief treatment.

NRC staff response:

The NRC staff understands that NYSERDA has contacted Holtec, the owner of the proprietary information, to obtain information for the areas that were either not addressed during the presentation or may be contained in the unredacted portion of the slide presentation. Regarding the application of proprietary protections, the NRC staff completed its review of the licensee's request for withholding information from public disclosure dated January 6, 2020 (ADAMS Accession No. ML20008D393), in accordance with 10 CFR 2.390.³ The technical areas identified in the NYS comments are noted by the PM and will be considered by the NRC staff as deemed necessary in their technical evaluation of the anticipated application. The proposed LAR has not been submitted to the NRC as of the date of issuance of this meeting summary;

³ NRC letter dated January 13, 2020, "Request for Withholding Information from Public Disclosure for Indian Point Nuclear Generating Unit No. 3" (ADAMS Accession No. ML20012H173).

however, the staff expects to receive the submission by the end of the first quarter of 2020 (March 2020) as was communicated by the licensee during the meeting.

NYS:

We appreciate your subsequent offer to address the State's questions, with any answers provided by Staff, in the meeting summary, and we appreciate Staff's willingness to make themselves available to answer the State's questions via a subsequent telephone call. We do intend to take Staff up on its willingness to hold additional conversations; however, we note that if any other participants on the call, which included local government representatives and representatives of the Congressional delegation, also experienced the State's problems in raising questions, this option will not address their concerns. As such, we request that this opportunity for additional communication with Staff be made available to all stakeholders who participated in the January 16 webinar.

NRC staff response:

The NRC's conference line service produced a participant list that indicated there were two local government representatives on the call (i.e., NYSEDA and the New York State Department of Public Service). There were also representatives from U.S Senate and Congressional offices. (See attendee list in the enclosure to the meeting summary). The NRC did not receive any comments or additional inquiries as follow-up to the subject meeting. There were two members of the public on the phone line; both individuals were contacted by the PM and were offered an opportunity to comment on the meeting. Both individuals provided comments and questions by e-mail regarding the transfer cask design, handling and operation of the transfer system, and the experience and training of operators.⁴ The NRC PM responded to both individuals and informed them that their comments will be considered as appropriate in the NRC staff's review of the proposed LAR.

No regulatory decisions were made regarding the acceptability of the licensee's proposed submittal. The open portion of the meeting was adjourned at approximately 10:32 a.m. The closed portion of the meeting began at 10:37 a.m. and was adjourned at approximately 11:10 a.m.

Aside from the aforementioned letter received by State of New York and the public comments received via e-mail, there have been no public meeting feedback forms received through the NRC public meeting feedback system.

⁴ Public comments from Sally Gellert dated February 25, 2020 (ADAMS Accession No. ML20057B727) and Donna Gilmore dated February 26, 2020 (ADAMS Accession No. ML20057G557).

Please direct any inquiries to me at 301-415-1030 or by e-mail to Richard.Guzman@nrc.gov.

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:
List of Attendees

cc: Listserv

SUBJECT: SUMMARY OF JANUARY 16, 2020, PARTIALLY CLOSED MEETING WITH
ENTERGY NUCLEAR OPERATIONS, INC. REGARDING PRE-SUBMITTAL
OF A LICENSE AMENDMENT REQUEST TO REPLACE THE INDIAN POINT
UNIT NO. 3 CRANE WITH A NEW HOLTEC HIGH-LIFT CRANE
(EPID L-2019-LRM-0094) DATED MARCH 3 , 2020

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DSchroeder, R-I	KConway, NMSS
EAndrews, R-I	NSheehan, R-I
JDalzell, R-III	JNicholson, R-I
JWeil, OCA	

ADAMS Accession No.: ML20059P129

OFFICE	NRR/DORL/LPL1/PM	NRR/DORL/LPL1/LA	NRR/DORL/LPL1/BC	NRR/DORL/LPL1/PM
NAME	RGuzman	LRonewicz	JDanna	RGuzman
DATE	3/02/2020	03/02/2020	03/03/2020	03/03/2020

OFFICIAL RECORD COPY

LIST OF ATTENDEES

JANUARY 16, 2020, PARTIALLY CLOSED PRESUBMITTAL MEETING

WITH ENTERGY NUCLEAR OPERATIONS, INC.

TO DISCUSS INDIAN POINT NUCLEAR GENERATING UNIT NO. 3

PROPOSED LICENSE AMENDMENT REGARDING NEW HOLTEC HIGH-LIFT CRANE

NAME	ORGANIZATION
Richard Guzman	U.S. Nuclear Regulatory Commission (NRC)
James Danna	NRC
Kamal Manoly	NRC
Brian Wittick	NRC
Steve Jones	NRC
Stewart Bailey	NRC
Dan Hoang	NRC
Ata Istar	NRC
Richard J. Burroni	Entergy Nuclear Operations, Inc. (Entergy)
Phil Couture	Entergy
Ted Gado	Entergy
John Schrage	Entergy
Ken Swanger	Entergy
Steven Malinski	Entergy
Joe Cascio	Holtec International
Chuck Bullard	Holtec International
Joyce Tomlinson	Holtec International
Matt Naylor	Holtec International
Ryan Konop	Holtec International
Dan Schroeder*	NRC
Elizabeth Andrews*	NRC
Jennifer Dalzell*	NRC
Kimberly Conway*	NRC
Neil Sheehan*	NRC
Jenny Weil*	NRC
John Nicholson*	NRC
Mahvash Mirzai*	Entergy
John Skonieczny*	Entergy
Susan Raimo*	Entergy

Enclosure

NAME	ORGANIZATION
Vishwas Mathur*	Holtec International
Jennifer Becker-Pollet*	Office of Congresswoman Nita Lowey (NY)
Vandan Patel*	Office of Senator Chuck Schumer (NY)
Geri Shapiro*	Office of Senator Kirsten Gillibrand (NY)
Janice Dean*	New York State Energy Research & Development Authority
Bridget Frymire*	New York State Department of Public Service
Donna Gilmore*	San Onofre Safety
Sally Gellert*	Member of the Public

* Participant names attending by teleconference were captured via automated voice prompt from the NRC's conference line service. The names of additional personnel participating via teleconference may not be included in this list if they joined the call-in line through the individuals listed above.