



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

May 4, 2020

Vice President, Operations
Entergy Nuclear Operations, Inc.
Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
Buchanan, NY 10511-0249

**SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT NO. 2 – CORRECTION TO
AMENDMENT NO. 294 ISSUED APRIL 28, 2020 RE: PERMANENTLY
DEFUELED TECHNICAL SPECIFICATIONS (EPID L-2019-LLA-0079)**

Dear Sir or Madam:

By letter dated April 28, 2020, the U.S. Nuclear Regulatory Commission (NRC) issued Amendment No. 294 to Renewed Facility Operating License No. DPR-26 for Indian Point Nuclear Generating Unit No. 2 (Indian Point 2). The amendment consisted of changes to the Technical Specifications (TSs) in response to your application dated April 15, 2019, as supplemented by letter dated October 22, 2019.

The amendment revised the Indian Point 2 Renewed Facility Operating License and the associated TSs to permanently defueled TSs, consistent with the permanent cessation of operations and permanent removal of fuel from the reactor vessel.

Subsequent to issuance of the amendment, the licensee informed the NRC of oversights as listed below.

- The Attachment pages did not completely list the pages that were to be removed and inserted.
- Page 9 of the issued Renewed Facility License did not include the date of April 28, 2020.
- The revised Title Page for Part II of Appendix C was not included.

There were numerical errors in subsections of the safety evaluation as listed below.

- Page 21 had an erroneous numbered section (Subsection 4.2.17 was followed with Subsection 4.2.20).
- Pages 34 through 37 had erroneous numbering (Subsections 4.3.5.2 to 4.3.5.4).

Please use Enclosures 1, 2, 3, and 4 of this letter as replacement pages to Amendment No. 294 issued on April 28, 2020. Marginal change bars have been added where corrections have been made. These corrections do not change any of the conclusions in the safety evaluation associated with the issuance of the amendment and do not affect the associated notice to the public.

If you have any questions, please contact me at 301-415-1030 or Richard.Guzman@nrc.gov. We apologize for any inconvenience caused by these oversights.

Sincerely,

/RA/

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

Docket No. 50-247

Enclosures:

1. Corrected Attachment pages to Amendment No. 294
2. Dated page 9 to Renewed Facility License
3. Title page for Part II of Appendix C
4. Corrected pages of Safety Evaluation (pages 21, 34, 36, and 37)

cc: Listserv

ENCLOSURE 1

Corrected Attachment pages to Amendment No. 294

ATTACHMENT TO LICENSE AMENDMENT NO. 294

INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

FACILITY OPERATING LICENSE NO. DPR-26

DOCKET NO. 50-247

Replace the following pages of the Facility Operating License; Appendix A, Permanently Defueled Technical Specifications; Appendix B, Environmental Technical Specification Requirements; and Appendix C, Inter-Unit Fuel Transfer Technical Specifications, with the attached revised pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Facility Operating License No. DPR-26

<u>REMOVE</u>	<u>INSERT</u>
-1- through -6- -9-	-1- through -6- -9-

Appendix A, Permanently Defueled Technical Specifications

<u>REMOVE</u>	<u>INSERT</u>
Title Page i through iv 1.1-1 through 1.1-6 1.2-1 through 1.2-2 1.3-1 through 1.3-12 1.4-1 through 1.4-8 2.0-1 3.0-1 through 3.0-5 3.1.1-1 through 3.7.10-2 3.7.11-1 3.7.12-1 3.7.13-1 through 3.7.13-2 3.7.14-1 through 3.9.6-1 4.0-1 through 4.0-2 5.2-1 5.4-1 5.5-2 through 5.5-16 5.6-1 through 5.6-5	Title Page i through ii 1.1-1 1.2-1 1.3-1 through 1.3-2 1.4-1 through 1.4-2 2.0-1 3.0-1 through 3.0-2 --- 3.7.11-1 3.7.12-1 3.7.13-1 through 3.7.13-2 --- 4.0-1 through 4.0-2 5.2-1 5.4-1 5.5-2 through 5.5-5 5.6-1

Appendix B, Environmental Technical Specification Requirements

REMOVE	INSERT
Title Page	Title Page
1-1	1-1
3-1	3-1
3-2	3-2
3-3	3-3
4-1	4-1
5-1	5-1
5-3	5-3
5-4	5-4

Appendix C, Inter-Unit Fuel Transfer Technical Specifications

REMOVE	INSERT
Part I Title Page	Part I Title Page
1	1
2	2
Part II Title Page	Part II Title Page

ENCLOSURE 2

Dated page 9 to Renewed Facility License

6. This renewed license is effective as of the date of issuance, and until the Commission notifies the licensee in writing that the license is terminated.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Ho K. Nieh, Director
Office of Nuclear Reactor Regulation

Attachments:

Appendix A – Permanently Defueled Technical Specifications
Appendix B – Environmental Technical Specification Requirements
Appendix C – Inter-Unit Fuel Transfer Technical Specifications

Date of Issuance: April 28, 2020

ENCLOSURE 3

Title page for Part II of Appendix C

APPENDIX C TO
FACILITY LICENSE FOR
ENTERGY NUCLEAR INDIAN POINT 2, LLC (ENIP2) AND
ENTERGY NUCLEAR OPERATIONS, INC. (ENO)

INDIAN POINT NUCLEAR
GENERATING UNIT No. 2

INTER-UNIT FUEL TRANSFER TECHNICAL SPECIFICATIONS

PART II: TECHNICAL SPECIFICATIONS

FACILITY LICENSE NO. DPR-26
DOCKET NO. 50-247

ENCLOSURE 4

Corrected pages of Safety Evaluation (pages 21, 34, 36, and 37)

4.2.17 License Condition 2.O

Currently, License Condition 2.O states:

Upon implementation of Amendment No. 258 adopting TSTF-448, Revision 3 (as supplemented), the determination of control room envelope (CRE) unfiltered air leakage as required by Technical Specification (TS) Surveillance Requirement (SR) 3.7.10.4, in accordance with TS 5.5.16.c.(i), the assessment of CRE habitability as required by TS 5.5.16.c.(ii), and the measurement of CRE pressure as required by TS 5.5.16.d, shall be considered met. Following implementation:

- (a) The first performance of SR 3.7.10.4, in accordance with TS 5.5.16.c.(i), shall be within the next 18 months since the time period since the most recent successful tracer gas test is greater than 6 years.
- (b) The first performance of the periodic assessment of CRE habitability, TS 5.5.16.c.(ii), shall be within the next 9 months since the time period since the most recent successful tracer gas test is greater than 3 years.
- (c) The first performance of the periodic measurement of CRE pressure, TS 5.5.16.d, shall be within 24 months, plus the 182 days allowed by SR 3.0.2, as measured from January 4, 2007, the date of the most recent successful pressure measurement test.

The licensee proposed to delete License Condition 2.O. The proposed change would remove the requirements of TSTF-448, "Control Room Habitability," which involve assessing the CRE habitability at the frequencies specified in Sections C.1 and C.2 of RG 1.197, Revision 0, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," dated May 2003 (ADAMS Accession No. ML031490664). The licensee proposed to not retain this license condition in the proposed PDTS, as it is a historical license condition, and the associated test, assessment, and measurement of the defined TSTF-448 requirements were completed in accordance with the schedule specified in the license condition. The NRC staff finds the deletion of License Condition 2.O acceptable.

4.2.18 License Condition 6

Currently, License Condition 6 states:

This renewed license is effective as of the date of issuance, and shall expire at midnight April 30, 2024.

The licensee proposed License Condition 6 to read:

This renewed license is effective as of the date of issuance, and until the Commission notifies the licensee in writing that the license is terminated.

The proposed change would modify this license condition to reflect the permanently shutdown and defueled condition of the facility. Consistent with 10 CFR 50.82(a)(2), the IP2 license will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel. The proposed change would revise License Condition 6 to conform with 10 CFR 50.51,

If a Completion Time requires periodic performance on a “once per . . .” basis, the above Frequency extension applies to each performance after the initial performance.

Exceptions to this Specification are stated in the individual Specifications.

The licensee proposed to revise SR 3.0.2 to state the following:

The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance.

The current SR 3.0.4 states the following:

Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO’s Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

The licensee proposed to revise SR 3.0.4 to state the following:

Entry into a specified condition in the Applicability of an LCO shall only be made when the LCO’s Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3.

The NRC staff reviewed the proposed changes to SRs 3.0.1, 3.0.2, and 3.0.4 and concludes that the changes are consistent with the transition to a permanently shutdown and defueled facility. Since 10 CFR 50.82(a)(2) prohibits the licensee from operating the plant or placing fuel in the reactor vessel, the references to modes and the discussions about shutting down the unit are no longer applicable. Further, the NRC staff agrees that the statements to be deleted are no longer necessary because the defueled TSs do not contain frequencies of the type described in the statements being deleted. Therefore, the staff finds that the proposed changes to delete these references reflect the plant status and are appropriate and acceptable.

4.3.5.2 TS Section 3.1, “Reactivity Control Systems”

TS Section 3.1, “Reactivity Control Systems,” in the IP2 TSs contains requirements to assure and verify operability of reactivity control systems. A description and evaluation of each of the specifications proposed for deletion are provided as follows:

- TS 3.1.1, “Shutdown Margin (SDM),” establishes shutdown margin as the minimum shutdown margin in the reactor core. The shutdown margin limits are specified in the Core Operating Limits Report (COLR). TS 3.1.1 is proposed for deletion and is applicable in MODE 2 with $k_{\text{eff}} < 1.0$ and MODES 3 through 5. After the certifications required by 10 CFR 50.82(a)(1) are docketed for IP2, the 10 CFR Part 50 license will no longer authorize operation of the reactor or placement or retention of fuel in the reactor

- TS 3.1.7, "Rod Position Indication," establishes that the individual rod position indication system and the demand position indication shall be operable. TS 3.1.7 is proposed for deletion and is applicable in MODES 1 and 2. After the certifications required by 10 CFR 50.82(a)(1) are docketed for IP2, the 10 CFR Part 50 license will no longer authorize operation of the reactor or placement or retention of fuel in the reactor vessel in accordance with 10 CFR 50.82(a)(2). Therefore, operation in MODES 1 and 2 will no longer occur, and TS 3.1.7 will not be applicable in a permanently defueled condition. The staff finds the deletion of TS 3.1.7 acceptable.
- TS 3.1.8, "Physics Tests Exceptions - Mode 2," establishes that during the performance of physics tests, the requirements of "Moderator Temperature Coefficient"; "Rod Group Alignment Limits"; "Shutdown Bank Insertion Limits"; "Control Bank Insertion Limits"; and "RCS Minimum Temperature for Criticality," may be suspended, provided that certain conditions as specified in LCO 3.1.8 are met. TS 3.1.8 is proposed for deletion and is applicable during physics tests initiated in MODE 2. After the certifications required by 10 CFR 50.82(a)(1) are docketed for IP2, the 10 CFR Part 50 license will no longer authorize operation of the reactor or placement or retention of fuel in the reactor vessel in accordance with 10 CFR 50.82(a)(2). Therefore, operation in the applicable mode and specified condition will no longer occur. TS 3.1.8 will not be applicable in a permanently defueled condition. The staff finds the deletion of TS 3.1.6 acceptable.

4.3.5.3 TS Section 3.2, "Power Distribution Limits"

TS Section 3.2, "Power Distribution Limits," in the IP2 TSs contains power distribution limits that provide assurance that fuel design criteria are not exceeded, and the accident analysis assumptions remain valid. A description of each of the specifications proposed for deletion is provided as follows:

- TS 3.2.1, "Heat Flux Hot Channel Factor ($F_Q(Z)$)," establishes that $F_Q(Z)$ shall be within the limits specified in the COLR. As a result, this TS will not apply in the permanently defueled condition. TS 3.2.1 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.
- TS 3.2.2, "Nuclear Enthalpy Rise Hot Channel Factor ($F_{N_{\Delta H}}^N$)," establishes that $F_{N_{\Delta H}}^N$ shall be within the limits specified in the COLR. TS 3.2.2 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.
- TS 3.2.3, "Axial Flux Difference (AFD) (Constant Axial Offset Control Methodology)," establishes that the AFD shall be maintained within the target band about the target flux difference. The target band is specified in the COLR. AFD may deviate outside the target band with thermal power < 90 percent rated thermal power but \geq 50 percent rated thermal power, provided AFD is within the acceptable operation limits, and cumulative penalty deviation time is \leq 1 hour during the previous 24 hours. The acceptable operation limits are specified in the COLR. TS 3.2.3 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.
- TS 3.2.4, "Quadrant Power Tilt Ratio (QPTR)," establishes that the QPTR shall be \leq 1.02. TS 3.2.4 does not apply once the reactor is permanently defueled; therefore, the TS is proposed to be deleted.

The licensee proposed to delete TS Section 3.2 in its entirety. These specifications do not apply to the safe storage and handling of spent fuel in the SFP. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the IP2 license will no longer authorize operation of the reactor or placement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2). Therefore, the specifications addressed in TS Section 3.2 will not be required, and these requirements will not apply in a permanently shutdown and defueled condition. Therefore, the NRC staff finds the deletion of TS Section 3.2 acceptable.

4.3.5.4 TS Section 3.3, "Instrumentation"

TS Section 3.3, "Instrumentation," in the IP2 TSs contains operability requirements for sensing and control instrumentation required for safe operation of the facility. Below are the specifications in TS Section 3.3.

- TS 3.3.1, "Reactor Protection System (RPS) Instrumentation," establishes that the RPS instrumentation for each function in Table 3.3.1-1 shall be operable.
- TS 3.3.2, "Engineered Safety Feature Actuation System (ESFAS) Instrumentation," establishes that the ESFAS instrumentation for each function in Table 3.3.2-1 shall be operable.
- TS 3.3.3, "Post Accident Monitoring (PAM) Instrumentation," establishes that the PAM instrumentation for each function in Table 3.3.3-1 shall be operable.
- TS 3.3.4, "Remote Shutdown," establishes that the remote shutdown functions shall be operable.
- TS 3.3.5, "Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation," establishes that certain LOP DG start instrumentation conditions as specified in LCO 3.3.5 shall be operable.
- TS 3.3.6, "Containment Purge System and Pressure Relief Line Isolation Instrumentation," establishes that the containment purge system and pressure relief line isolation instrumentation for each function in Table 3.3.6-1 shall be operable.
- TS 3.3.7, "Control Room Ventilation System (CRVS) Actuation Instrumentation," establishes that the CRVS actuation instrumentation for each function in Table 3.3.7-1 shall be operable.

The licensee proposed to delete TS Section 3.3 in its entirety. These specifications do not apply to the safe storage and handling of spent fuel in the SFP. Once the certifications required by 10 CFR 50.82(a)(1) are docketed, the IP2 license will no longer authorize operation of the reactor or placement or retention of fuel in the reactor vessel, pursuant to 10 CFR 50.82(a)(2). Therefore, the specifications addressed in TS Section 3.3 will not be required, and these requirements will not apply in a permanently shutdown and defueled condition. Therefore, the NRC staff finds the deletion of TS Section 3.3 acceptable.

4.3.5.5 TS Section 3.4, "Reactor Coolant System (RCS)"

TS Section 3.4, "Reactor Coolant System (RCS)," in the IP2 TSs contains requirements that provide for appropriate control of process variables, design features, or operating restrictions

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