



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

December 22, 2008

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 NOS. 2 AND 3 - ISSUANCE OF
AMENDMENTS RE: CONTROL ROOM ENVELOPE HABITABILITY (TAC NOS.
MD7523 AND MD7524)

Dear Sir or Madam:

The Commission has issued the enclosed Amendment No. 258 to Facility Operating License No. DPR-26 for the Indian Point Nuclear Generating Unit No. 2 and Amendment No. 239 to Facility Operating License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated December 18, 2007, as supplemented by letters dated September 18, 2008, and October 28, 2008.

The amendments revise the TSs by adding a Control Room Habitability Program and revising the TS on the Control Room Ventilation System in accordance with Technical Specifications Task Force (TSTF) change traveler TSTF-448, "Control Room Habitability." License conditions are added regarding the initial performance of the new surveillance and assessment requirements.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in cursive script, reading "John P. Boska", is positioned above the printed name and title.

John P. Boska, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-247 and 50-286

Enclosures:

1. Amendment No. 258 to DPR-26
2. Amendment No. 239 to DPR-64
3. Safety Evaluation

cc w/encls: Distribution via Listserv



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

ENTERGY NUCLEAR INDIAN POINT 2, LLC

ENTERGY NUCLEAR OPERATIONS, INC.

DOCKET NO. 50-247

INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 258
License No. DPR-26

1. The Nuclear Regulatory Commission (the Commission) has found that:

- A. The application for amendment by Entergy Nuclear Operations, Inc. (the licensee) dated December 18, 2007, as supplemented on September 18, 2008, and October 28, 2008, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
- B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
- C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
- D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
- E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-26 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 258, are hereby incorporated in the license. ENO shall operate the facility in accordance with the Technical Specifications.

3. In addition, Paragraph 2.O is hereby added to Facility Operating License No. DPR-26 to read as follows:

O. Control Room Envelope Habitability

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.

4. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Mark G. Kowal, Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License and
Technical Specifications

Date of Issuance: December 22, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 258

FACILITY OPERATING LICENSE NO. DPR-26

DOCKET NO. 50-247

Replace the following pages of the License with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Page

3
5a

Insert Page

3
5a

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

Table of Contents p. iv
3.7.10-1
3.7.10-2
5.5-15
--

Insert Pages

Table of Contents p. iv
3.7.10-1
3.7.10-2
5.5-15
5.5-16

instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- | | | |
|-----|---|-----------------------|
| (4) | ENO pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; | Amdt. 42
10-17-78 |
| (5) | ENO pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility. | Amdt. 220
09-06-01 |

C. This amended license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

ENO is authorized to operate the facility at steady state reactor core power levels not in excess of 3216 megawatts thermal.	Amdt. 241 10-27-04
--	-----------------------

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 258, are hereby incorporated in the license. ENO shall operate the facility in accordance with the Technical Specifications. |

(3) The following conditions relate to the amendment approving the conversion to Improved Standard Technical Specifications:

1. This amendment authorizes the relocation of certain Technical Specification requirements and detailed information to licensee-controlled documents as described in Table R, "Relocated Technical Specifications from the CTS," and Table LA, "Removed Details and Less Restrictive Administrative Changes to the CTS" attached to the NRC staff's Safety Evaluation enclosed with this amendment. The relocation of requirements and detailed information shall be completed on or before the implementation of this amendment.

O. Control Room Envelope Habitability

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.

3. On the closing date of the transfer of the license, Con Edison shall transfer to ENIP2 all of the accumulated decommissioning trust funds for IP2 and such additional funds to be deposited in the decommissioning trust for IP2 such that the total amount transferred for Indian Point Nuclear Generating Unit No. 1 (IP1) and IP2 is no less than \$430,000,000. Furthermore, ENIP2 shall either (a) establish a provisional trust for decommissioning funding assurance for IP1 and IP2 in an amount no less than \$25,000,000 (to be updated as required under applicable NRC regulations, unless otherwise approved by the NRC) or (b) obtain a surety bond for an amount no less than \$25,000,000 (to be updated as required under applicable NRC regulations, unless otherwise approved by the NRC). The total decommissioning funding assurance provided for IP2 by the combination of the decommissioning trust and the provisional trust or surety bond at the time of transfer of the licenses shall be at a level no less than the amounts calculated pursuant to, and required under, 10 CFR 50.75. The decommissioning trust, provisional trust, and surety bond shall be subject to or be consistent with the following requirements, as applicable:

Facility Operating License No. DPR-26
Appendix A – Technical Specifications

TABLE OF CONTENTS

5.0	ADMINISTRATIVE CONTROLS
5.1	Responsibility
5.2	Organization
5.2.1	Onsite and Offsite Organizations
5.2.2	Unit Staff
5.3	Unit Staff Qualifications
5.4	Procedures
5.5	Programs And Manuals
5.5.1	Offsite Dose Calculation Manual (ODCM)
5.5.2	Primary Coolant Sources Outside Containment
5.5.3	Radioactive Effluent Controls Program
5.5.4	Component Cyclic or Transient Limit
5.5.5	Reactor Coolant Pump Flywheel Inspection Program
5.5.6	Inservice Testing Program
5.5.7	Steam Generator (SG) Program
5.5.8	Secondary Water Chemistry Program
5.5.9	Ventilation Filter Testing Program (VFTP)
5.5.10	Explosive Gas and Storage Tank Radioactivity Monitoring Program
5.5.11	Diesel Fuel Oil Testing Program
5.5.12	Technical Specification (TS) Bases Control Program
5.5.13	Safety Function Determination Program (SFDP)
5.5.14	Containment Leakage Rate Testing Program
5.5.15	Battery Monitoring and Maintenance Program
5.5.16	Control Room Envelope Habitability Program
5.6	Reporting Requirements
5.6.1	Not Used
5.6.2	Annual Radiological Environmental Operating Report
5.6.3	Radioactive Effluent Release Report
5.6.4	Not Used
5.6.5	CORE OPERATING LIMITS REPORT (COLR)
5.6.6	Post Accident Monitoring Report
5.6.7	Steam Generator Tube Inspection Report
5.7	High Radiation Area

3.7 PLANT SYSTEMS

3.7.10 Control Room Ventilation System (CRVS)

LCO 3.7.10 Two CRVS trains shall be OPERABLE.

- NOTE -

The control room envelope (CRE) boundary may be opened intermittently under administrative control.

APPLICABILITY: MODES 1, 2, 3 and 4,
During movement of recently irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CRVS train inoperable for reasons other than Condition B.	A.1 Restore CRVS train to OPERABLE status.	7 days
B. One or more CRVS trains inoperable due to inoperable CRE boundary in MODE 1, 2, 3, or 4.	B.1 Initiate action to implement mitigating actions.	Immediately
	<u>AND</u>	
	B.2 Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.	24 hours
	<u>AND</u>	
	B.3 Restore CRE boundary to OPERABLE status.	90 days
C. Two CRVS trains inoperable for reasons other than Condition B.	C.1 Restore CRVS to OPERABLE status	72 hours
D. Required Action and associated Completion Time of Condition A, B or C not met in Mode 1, 2, 3, or 4.	D.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	D.2 Be in MODE 5.	36 hours

Actions (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. One CRVS train inoperable during movement of recently irradiated fuel assemblies	E.1 Place OPERABLE CRVS train in pressurization mode.	Immediately
	<u>OR</u> E.2 Suspend movement of recently irradiated fuel assemblies.	Immediately
F. Two CRVS trains inoperable during movement of recently irradiated fuel assemblies. <u>OR</u> One or more CRVS trains inoperable due to an inoperable CRE boundary during movement of recently irradiated fuel assemblies.	F.1 Suspend movement of recently irradiated fuel assemblies.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.10.1	Operate each CRVS train for ≥ 15 minutes.	31 days
SR 3.7.10.2	Perform required CRVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.10.3	Verify each CRVS train actuates on an actual or simulated actuation signal.	24 months
SR 3.7.10.4	Perform required CRE unfiltered air leakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

5.5 Programs and Manuals

5.5.14 Containment Leakage Rate Testing Program (continued)

3. Isolation Valve Seal Water System leakage rate acceptance criteria is $\leq 14,700$ cc/hour.
- e. Acceptance criterion for leakage into containment from isolation valves sealed with the service water system is ≤ 0.36 gpm per fan cooler unit when pressurized at ≥ 1.1 P_a. This limit protects the internal recirculation pumps from flooding during the 12-month period of post accident recirculation.
- f. The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.
- g. Nothing in these Technical Specifications shall be construed to modify the testing Frequencies required by 10 CFR 50, Appendix J.

5.5.15 Battery Monitoring and Maintenance Program

This program provides for battery restoration and maintenance, based on the recommendations of IEEE Standard 450-1995, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications," or of the battery manufacturer including the following:

- a. Actions to restore battery cells with float voltage < 2.13 V, and
- b. Actions to equalize the test battery cells that had been discovered with electrolyte level below the minimum established design limit.

5.5.16 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Ventilation System (CRVS), CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem total effective dose equivalent (TEDE) for the duration of the accident. The program shall include the following elements:

5.5 Programs and Manuals

5.5.16 Control Room Envelope Habitability Program (continued)

- a. The definition of the CRE and the CRE boundary.
 - b. Requirements for maintaining the CRE boundary in its design condition including configuration control and preventive maintenance.
 - c. Requirements for (i) determining the unfiltered air leakage past the CRE boundary into the CRE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.
 - d. Measurement, at designated locations, of the CRE pressure relative to all external areas adjacent to the CRE boundary during the pressurization mode of operation by one train of the CRVS, operating at the flow rate required by the VFTP, at a Frequency of 24 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the 24 month assessment of the CRE boundary.
 - e. The quantitative limits on unfiltered air leakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air leakage measured by the testing described in paragraph c. The unfiltered air leakage limit for radiological challenges is the leakage flow rate assumed in the licensing basis analysis of DBA consequences. Unfiltered air leakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.
 - f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered leakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.
-



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

ENTERGY NUCLEAR INDIAN POINT 3, LLC

ENTERGY NUCLEAR OPERATIONS, INC.

DOCKET NO. 50-286

INDIAN POINT NUCLEAR GENERATING UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 239
License No. DPR-64

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Entergy Nuclear Operations, Inc. (the licensee) dated December 18, 2007, as supplemented on September 18, 2008, and October 28, 2008, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-64 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 239, are hereby incorporated in the license. ENO shall operate the facility in accordance with the Technical Specifications.

3. In addition, Paragraph 2.AD is hereby added to Facility Operating License No. DPR-64 to read as follows:

AD. Control Room Envelope Habitability

Upon implementation of Amendment No. 239 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) 3.7.11.4, 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 3.7.11.4, in accordance with TS 5.5.16.c.(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from February 1, 2005, the date of the most recent successful tracer gas test, as stated in the June 28, 2005, letter response to Generic Letter 2003-01.
- (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 June 18, 2007, the date of the most recent successful pressure measurement test.

4. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Mark G. Kowal".

Mark G. Kowal, Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License and
Technical Specifications

Date of Issuance: December 22, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 239

FACILITY OPERATING LICENSE NO. DPR-64

DOCKET NO. 50-286

Replace the following pages of the License with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Page

3

8

--

Insert Page

3

8

9

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

Table of Contents p. iv

3.7.11-1

3.7.11-2

5.0-31

--

Insert Pages

Table of Contents p. iv

3.7.11-1

3.7.11-2

5.0-31

5.0-31a

- (4) ENO pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; Amdt. 203
11/27/00
- (5) ENO pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility. Amdt. 203
11/27/00
- C. This amended license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level
- ENO is authorized to operate the facility at steady state reactor core power levels not in excess of 3216 megawatts thermal (100% of rated power).
- (2) Technical Specifications
- The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 239, are hereby incorporated in the License. ENO shall operate the facility in accordance with the Technical Specifications.
- (3) (DELETED) Amdt. 205
2-27-01
- (4) (DELETED) Amdt. 205
2-27-01
- D. (DELETED) Amdt.46
2-16-83
- E. (DELETED) Amdt.37
5-14-81
- F. This amended license is also subject to appropriate conditions by the New York State Department of Environmental Conservation in its letter of May 2, 1975, to Consolidated Edison Company of New York, Inc., granting a Section 401 certification under the Federal Water Pollution Control Act Amendments of 1972.

AC. Mitigation Strategy License Condition

The licensee shall develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
 - 1. Pre-defined coordinated fire response strategy and guidance
 - 2. Assessment of mutual aid fire fighting assets
 - 3. Designated staging areas for equipment and materials
 - 4. Command and control
 - 5. Training of response personnel
- (b) Operations to mitigate fuel damage considering the following:
 - 1. Protection and use of personnel assets
 - 2. Communications
 - 3. Minimizing fire spread
 - 4. Procedures for implementing integrated fire response strategy
 - 5. Identification of readily-available pre-staged equipment
 - 6. Training on integrated fire response strategy
 - 7. Spent fuel pool mitigation measures
- (c) Actions to minimize release to include consideration of:
 - 1. Water spray scrubbing
 - 2. Dose to onsite responders

AD. Control Room Envelope Habitability

Upon implementation of Amendment No. 239 adopting TSTF-448, Revision 3 (as supplemented), the determination of control room envelope (CRE) unfiltered air inleakage as required by Technical Specification (TS) Surveillance Requirement (SR) 3.7.11.4, 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 3.7.11.4, in accordance with TS 5.5.16.c.(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from February 1, 2005, the date of the most recent successful tracer gas test, as stated in the June 28, 2005, letter response to Generic Letter 2003-01.
- (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 June 18, 2007, the date of the most recent successful pressure measurement test.

3. This amended license is effective at 12:01 a.m., November 21, 2000, and shall expire at midnight December 12, 2015.

Original signed by

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Attachment: Changes to the Technical Specifications

Date of Issuance: March 8, 1978

Facility Operating License No. DPR-64
Appendix A – Technical Specifications

TABLE OF CONTENTS

4.0 DESIGN FEATURES

- 4.1 Site Location
- 4.2 Reactor Core
- 4.3 Fuel Storage

5.0 ADMINISTRATIVE CONTROLS

- 5.1 Responsibility
- 5.2 Organization
- 5.3 Unit Staff Qualifications
- 5.4 Procedures
- 5.5 Programs and Manuals
 - 5.5.1 Offsite Dose Calculation Manual (ODCM)
 - 5.5.2 Primary Coolant Sources Outside Containment
 - 5.5.3 NOT USED
 - 5.5.4 Radioactive Effluent Controls Program
 - 5.5.5 Component Cyclic or Transient Limit
 - 5.5.6 Reactor Coolant Pump Flywheel Inspection Program
 - 5.5.7 Inservice Testing Program
 - 5.5.8 Steam Generator (SG) Program
 - 5.5.9 Secondary Water Chemistry Program
 - 5.5.10 Ventilation Filter Testing Program (VFTP)
 - 5.5.11 Explosive Gas and Storage Tank Radioactivity Monitoring Program
 - 5.5.12 Diesel Fuel Oil Testing Program
 - 5.5.13 Technical Specification (TS) Bases Control Program
 - 5.5.14 Safety Function Determination Program (SFDP)
 - 5.5.15 Containment Leakage Rate Testing Program
 - 5.5.16 Control Room Envelope Habitability Program
- 5.6 Reporting Requirements
 - 5.6.1 NOT USED
 - 5.6.2 Annual Radiological Environmental Operating Report
 - 5.6.3 Radioactive Effluent Release Report
 - 5.6.4 NOT USED
 - 5.6.5 CORE OPERATING LIMITS REPORT (COLR)
 - 5.6.6 NOT USED
 - 5.6.7 Post Accident Monitoring Instrumentation (PAM) Report
 - 5.6.8 Steam Generator Tube Inspection Report
- 5.7 High Radiation Area

3.7 PLANT SYSTEMS

3.7.11 Control Room Ventilation System (CRVS)

LCO 3.7.11 Two CRVS trains shall be OPERABLE.

- NOTE -

The control room envelope (CRE) boundary may be opened intermittently under administrative control.

APPLICABILITY: MODES 1, 2, 3 and 4,
During movement of recently irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CRVS train inoperable for reasons other than Condition B.	A.1 Restore CRVS train to OPERABLE status.	7 days
B. One or more CRVS trains inoperable due to inoperable CRE boundary in MODE 1, 2, 3, or 4.	B.1 Initiate action to implement mitigating actions.	Immediately
	<u>AND</u>	
	B.2 Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.	24 hours
	<u>AND</u>	
	B.3 Restore CRE boundary to OPERABLE status.	90 days
C. Two CRVS trains inoperable for reasons other than Condition B	C.1 Restore one CRVS train to OPERABLE status.	72 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A, B or C not met in Mode 1, 2, 3, or 4.	D.1 Be in MODE 3. <u>AND</u>	6 hours
	D.2 Be in MODE 5.	36 hours
E. One CRVS train inoperable during movement of recently irradiated fuel assemblies.	E.1 Place OPERABLE CRVS train in pressurization mode. <u>OR</u>	Immediately
	E.2 Suspend movement of recently irradiated fuel assemblies.	Immediately
F. Two CRVS trains inoperable during movement of recently irradiated fuel assemblies. OR One or more CRVS trains inoperable due to an inoperable CRE boundary during movement of recently irradiated fuel assemblies.	F.1 Suspend movement of recently irradiated fuel assemblies.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.11.1	Operate each CRVS train for ≥ 15 minutes.	31 days
SR 3.7.11.2	Perform required CRVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.11.3	Verify each CRVS train actuates on an actual or simulated actuation signal.	24 months
SR 3.7.11.4	Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

5.5 Programs and Manuals

5.5.15 Containment Leakage Rate Testing Program (continued)

cooler unit when pressurized at $\geq 1.1 P_a$. This limit protects the internal recirculation pumps from flooding during the 12-month period of post accident recirculation.

The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.

Nothing in these Technical Specifications shall be construed to Modify the testing Frequencies required by 10CFR50, Appendix J.

The calculated peak containment internal pressure for the design basis loss of coolant accident, P_a , is 42.0 psig. The containment design pressure is 47 psig.

The maximum allowable primary containment leakage rate, L_a , at P_a , shall be 0.1% of primary containment air weight per day.

5.5.16 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Ventilation System (CRVS), CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem total effective dose equivalent (TEDE) for the duration of the accident. The program shall include the following elements:

5.5.16 Control Room Envelope Habitability Program (continued)

- a. The definition of the CRE and the CRE boundary.
 - b. Requirements for maintaining the CRE boundary in its design condition including configuration control and preventive maintenance.
 - c. Requirements for (i) determining the unfiltered air inleakage past the CRE boundary into the CRE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.
 - d. Measurement, at designated locations, of the CRE pressure relative to all external areas adjacent to the CRE boundary during the pressurization mode of operation by one train of the CRVS, operating at the flow rate required by the VFTP, at a Frequency of 24 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the 24 month assessment of the CRE boundary.
 - e. The quantitative limits on unfiltered air inleakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air inleakage measured by the testing described in paragraph c. The unfiltered air inleakage limit for radiological challenges is the inleakage flow rate assumed in the licensing basis analysis of DBA consequences. Unfiltered air inleakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.
 - f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered inleakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.
-



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 258 TO FACILITY OPERATING LICENSE NO. DPR-26
AND AMENDMENT NO. 239 TO FACILITY OPERATING LICENSE NO. DPR-64
ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3
DOCKET NOS. 50-247 AND 50-286

1.0 INTRODUCTION

By letter dated December 18, 2007, Agencywide Documents Access and Management System (ADAMS) Accession No. ML073620376, as supplemented by letters dated September 18, 2008 and October 28, 2008, ADAMS Accession Nos. ML082700463 and ML083120426, Entergy Nuclear Operations, Inc. (the licensee) submitted a license amendment request (LAR) for changes to the Indian Point Nuclear Generating Unit Nos. 2 and 3 (IP2 and IP3) Technical Specifications (TSs). The supplements dated September 18, 2008, and October 28, 2008, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination. The proposed changes would modify TS requirements in accordance with Technical Specifications Task Force (TSTF) change traveler TSTF-448, "Control Room Habitability."

On August 8, 2006, the commercial nuclear electrical power generation industry owners group submitted a proposed change, TSTF-448, Revision 3, to the improved standard technical specifications (STS) (NUREGs 1430-1434) on behalf of the industry (TSTF-448, Revisions 0, 1, and 2 were prior draft iterations). On December 29, 2006, the owners group submitted a minor correction to TSTF-448, Revision 3. TSTF-448, Revision 3, is a proposal to establish more effective and appropriate action, surveillance, and administrative STS requirements related to ensuring the habitability of the control room envelope (CRE).

In NRC Generic Letter (GL) 2003-01 (Reference 1), licensees were alerted to findings at facilities that existing TS surveillance requirements (SRs) for the Control Room Emergency Filtration System (CREFS) may not be adequate. Specifically, the results of ASTM E741 (Reference 2) tracer gas tests to measure CRE unfiltered inleakage at facilities indicated that the differential pressure surveillance is not a reliable method for demonstrating CRE boundary operability. Licensees were requested to address existing TS as follows:

Provide confirmation that your technical specifications verify the integrity [i.e., operability] of the CRE [boundary], and the assumed [unfiltered] inleakage rates of potentially contaminated air. If you currently have a differential pressure surveillance requirement to demonstrate CRE [boundary] integrity, provide the

basis for your conclusion that it remains adequate to demonstrate CRE integrity in light of the ASTM E741 testing results. If you conclude that your differential pressure surveillance requirement is no longer adequate, provide a schedule for: 1) revising the surveillance requirement in your technical specification to reference an acceptable surveillance methodology (e.g., ASTM E741), and 2) making any necessary modifications to your CRE [boundary] so that compliance with your new surveillance requirement can be demonstrated.

If your facility does not currently have a technical specification surveillance requirement for your CRE integrity, explain how and at what frequency you confirm your CRE integrity and why this is adequate to demonstrate CRE integrity.

To promote standardization and to minimize the resources that would be needed to create and process plant-specific amendment applications in response to the concerns described in the GL, the industry and the NRC proposed revisions to CRE habitability system requirements contained in the STS, using the STS change traveler process. This effort culminated in Revision 3 to traveler TSTF-448, "Control Room Habitability," which the NRC staff approved on January 17, 2007.

Consistent with the traveler as incorporated into NUREG-1431, the licensee proposed revising action and SRs in IP2 TS 3.7.10, "Control Room Ventilation System (CRVS)," IP3 TS 3.7.11, "Control Room Ventilation System (CRVS)," and adding a new administrative controls program, IP2 and IP3 TS 5.5.16, "Control Room Envelope Habitability Program." The purpose of the changes is to ensure that CRE boundary operability is maintained and verified through effective surveillance and programmatic requirements, and that appropriate remedial actions are taken in the event of an inoperable CRE boundary.

The NRC issued a model safety evaluation (SE) for TSTF-448, Revision 3, in the *Federal Register* on January 17, 2007 (72 FR 2022). Some editorial and plant-specific changes were incorporated into this SE, resulting in minor deviations from the model SE. In TSTF-448, Revision 3, the control room emergency ventilation system (CREVS) for Westinghouse plants is designated as the Control Room Emergency Filtration System (CREFS). At IP2 and IP3, the CREVS is designated as the Control Room Ventilation System (CRVS).

In addition, IP3 is revising some of the wording of TS 3.7.11 to be consistent with the TSTF-448, Revision 3, wording.

2.0 REGULATORY EVALUATION

2.1 Control Room and Control Room Envelope

NRC Regulatory Guide 1.196, "Control Room Habitability at Light-water Nuclear Power Reactors," Revision 0, May 2003, (Reference 4) uses the term "control room envelope" in addition to the term "control room" and defines each term as follows:

Control Room: The plant area, defined in the facility licensing basis, in which actions can be taken to operate the plant safely under normal conditions and to maintain the reactor in a safe condition during accident situations. It

encompasses the instrumentation and controls necessary for a safe shutdown of the plant and typically includes the critical document reference file, computer room (if used as an integral part of the emergency response plan), shift supervisor's office, operator wash room and kitchen, and other critical areas to which frequent personnel access or continuous occupancy may be necessary in the event of an accident.

Control Room Envelope: The plant area, defined in the facility licensing basis, that in the event of an emergency, can be isolated from the plant areas and the environment external to the CRE. This area is served by an emergency ventilation system, with the intent of maintaining the habitability of the control room. This area encompasses the control room, and may encompass other non critical areas to which frequent personnel access or continuous occupancy is not necessary in the event of an accident.

NRC Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity At Nuclear Power Reactors," Revision 0, May 2003 (Reference 5), also contains these definitions, but uses the term CRE to mean both. This is because the protected environment provided for operators varies with the nuclear power facility. At IP2 and IP3, to be consistent with the proposed changes, the term CRE is used to designate both.

2.2 Control Room Ventilation System (CRVS)

The CRVS provides a protected environment from which operators can control the unit, during airborne challenges from radioactivity, hazardous chemicals, and fire byproducts, such as fire suppression agents and smoke, during both normal and accident conditions.

The CRVS is designed to maintain a habitable environment in the control room envelope for 30 days of continuous occupancy after a design-basis accident (DBA) without exceeding a 5 rem total effective dose equivalent (TEDE).

The CRVS consists of two redundant trains, each capable of maintaining the habitability of the CRE. The CRVS is considered operable when the individual components necessary to limit operator exposure are operable in both trains. A CRVS train is considered operable when the associated:

- Fan is operable;
- High efficiency particulate air (HEPA) filters and charcoal adsorbers are not excessively restricting flow, and are capable of performing their filtration functions; and
- Heater, demister, ductwork, valves, and dampers are operable, and air circulation can be maintained

The CRE boundary is considered operable when the measured unfiltered air inleakage is less than or equal to the inleakage value assumed by the licensing basis analyses of DBA consequences to CRE occupants.

2.3 Regulations Applicable to Control Room Habitability

In Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50,

"Domestic Licensing of Production and Utilization Facilities," General Design Criteria (GDC) 1, 2, 3, 4, 5, and 19 apply to CRE habitability. IP2 and IP3 were not licensed under the GDC from 10 CFR Part 50, but were licensed under similar plant-specific design criteria as described in the IP2 and IP3 licensing basis documents, such as the Updated Final Safety Analysis Report. The following are the applicable GDC for IP2 and IP3.

UFSAR GDC 1, "Quality Standards" requires that those systems and components of reactor facilities, which are essential to the prevention, or the mitigation of the consequences, of nuclear accidents, which could cause undue risk to the health and safety of the public shall be identified and then designed, fabricated, and erected to quality standards that reflect the importance of the safety function to be performed.

UFSAR GDC 2, "Design Basis for Protection Against Natural Phenomena," requires that systems and components important to safety be designed to withstand the effects of earthquakes and other natural hazards.

UFSAR GDC 3, "Fire Protection," requires that structures, systems, and components (SSCs) important to safety be designed and located to minimize the probability and effect of fires and explosions.

UFSAR GDC 4, "Sharing of Systems," requires that SSCs important to safety not be shared among nuclear power units unless it can be shown that such sharing will not result in undue risk to the health and safety of the public.

UFSAR GDC 11, "Control Room," requires that the facility shall be provided with a control room from which actions to maintain safe operational status of the plant can be controlled. Adequate radiation protection shall be provided to permit continuous occupancy of the control room under any credible post-accident condition or as an alternative, access to other areas of the facility as necessary to shut down and maintain safe control of the facility without excessive radiation exposures of personnel.

2.4 Adoption of TSTF-448, Revision 3, by IP2 and IP3

TSTF-448, Revision 3, assures that the facility's TS LCO for the CRVS is met by demonstrating unfiltered leakage into the CRE is within those limits assumed in the analyses for the exposure to the control room occupants. This is a condition for the operability of the CRE boundary. In support of this surveillance, which specifies a test interval (frequency) described in Regulatory Guide (RG) 1.197, TSTF-448 also adds TS administrative controls to assure the habitability of the CRE between performances of the ASTM E741 test. In addition, adoption of TSTF-448 will establish clearly stated and reasonable required actions in the event CRE unfiltered inleakage is found to exceed the analysis assumption. The IP2 and IP3 TS will continue to provide surveillance requirements to adequately test the CRVS.

The changes made using TSTF-448 to the IP2 and IP3 TS requirements for the CRVS and the CRE boundary conform to 10 CFR 50.36(c)(2) and 10 CFR 50.36(c)(3). Their adoption will better assure that the CRE will remain habitable during normal operation and DBA conditions. These changes are, therefore, acceptable from a regulatory standpoint.

2.5 Requirement for CRVS Operability During Movement of Recently Irradiated Fuel Assemblies by IP3

The NRC staff reviews the radiological effects of a fuel-handling accident on control room operators for licensees approved to use the alternate source term using the accident dose criteria in 10 CFR 50.67. IP3 has been approved to use the alternate source term.

3.0 TECHNICAL EVALUATION

3.1 Overview of Proposed Changes Associated with TSTF-448, Revision 3

The proposed amendment would strengthen CRE habitability TS requirements by changing IP2 TS 3.7.10, CRVS, and IP3 TS 3.7.11, CRVS, and adding a new TS administrative controls program on CRE habitability. Accompanying the proposed TS changes are appropriate conforming technical changes to the TS Bases.

The NRC staff compared the proposed TS changes to the STS and the STS markups and to the licensee's proposed adoption of TSTF-448. The NRC staff also reviewed the proposed changes to the IP2 and IP3 TS Bases for consistency with the TSTF-448 Bases and the plant-specific design and licensing bases. The proposed Bases, for IP2 TS 3.7.10 and IP3 TS 3.7.11, refer to specific guidance in NEI 99-03, "Control Room Habitability Assessment Guidance," Revision 0, dated June 2001 (Reference 6), which the NRC staff has formally endorsed, with exceptions, through RG 1.196, "Control Room Habitability at Light-Water Nuclear Power Reactors," dated May 2003 (Reference 4) and are consistent with the TSTF-448 Bases.

3.2 Editorial Changes Associated with TSTF-448, Revision 3

The licensee proposed editorial changes to establish standard terminology, such as "control room envelope (CRE)" in place of "control room," except for the plant-specific name for the CRVS, and "radiological, chemical, and smoke hazards (or challenges)" in place of various phrases to describe the hazards that CRE occupants are protected from by the CRVS. These changes improve the usability and quality of the presentation of the TS, have no impact on safety, and therefore, are acceptable.

3.3 IP2 TS 3.7.10, CRVS and IP3 TS 3.7.11, CRVS

The licensee proposed to establish new action requirements for an inoperable CRE boundary. Currently, if one CRVS train is determined to be inoperable due to an inoperable CRE boundary, existing Actions require restoring the train (and the CRE boundary) to operable status in 7 days. If two trains are determined to be inoperable due to an inoperable CRE boundary, existing Actions specifies restoring a train (and the CRE boundary) to operable status within 72 hours. These existing Actions are more restrictive than would be appropriate in situations for which CRE occupant implementation of compensatory measures or mitigating actions would temporarily afford adequate CRE occupant protection from postulated airborne hazards. To account for such situations, the licensee proposed to revise the action requirements for when one or more CRVS trains are inoperable due to an inoperable CRE boundary in MODE 1, 2, 3, or 4. The new Action would allow 90 days to restore the CRE boundary (and consequently, the affected CRVS trains to operable status, provided that mitigating actions are immediately implemented and within 24 hours are verified to ensure, that in the event of a DBA, CRE

occupant radiological exposures will not exceed the calculated dose of the licensing basis analyses of DBA consequences, and that CRE occupants are protected from hazardous chemicals and smoke.

The 24-hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions. The 90-day Completion Time is reasonable based on the determination that the mitigating actions will ensure protection of CRE occupants within analyzed limits while limiting the probability that CRE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA. The 90-day Completion Time is a reasonable time to diagnose, plan and possibly repair, and test most anticipated problems with the CRE boundary. Therefore, the proposed Actions for an inoperable CRE in Modes 1, 2, 3, and 4 are acceptable.

The licensee also proposed to modify the CRVS LCO by adding a NOTE allowing the CRE boundary to be opened intermittently under administrative controls. This is necessary as people often enter and exit the CRE, or perform maintenance there, which affects the CRE boundary. The Bases state that this NOTE

only applies to openings in the CRE boundary that can be rapidly restored to the design condition, such as doors, hatches, floor plugs, and access panels. For entry and exit through doors, the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, these controls should be proceduralized and consist of stationing a dedicated individual at the opening who is in continuous communication with operators in the CRE. This individual will have a method to rapidly close the opening and to restore the CRE boundary to a condition equivalent to the design condition when a need for CRE isolation is indicated.

This NOTE is acceptable because the administrative controls will ensure that the opening will be quickly sealed to maintain the validity of the licensing basis analyses of DBA consequences.

In the pressurization mode of operation, the CRVS isolates unfiltered ventilation air supply intakes, filters the emergency ventilation air supply to the CRE, and pressurizes the CRE to minimize unfiltered air leakage past the CRE boundary. The licensee proposed to modify the CRE pressurization SR. This SR currently requires verifying that one CRVS train, operating in the pressurization mode, can maintain a positive pressure at a given makeup flow rate. The modification of this SR is proposed because measurements of unfiltered air leakage into the CRE at numerous reactor facilities demonstrated that a basic assumption of this SR, an essentially leak tight CRE boundary, was incorrect for most facilities. Hence, meeting this SR by achieving the required CRE pressure is not necessarily a conclusive indication of CRE boundary leak tightness, i.e., CRE boundary operability. Based on the adoption of TSTF-448, Revision 3, the licensee's proposal to modify IP2 SR 3.7.10.4 and IP3 SR 3.7.11.4 is acceptable.

The proposed CRE inleakage measurement SR states, "Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program." The CRE Habitability Program TS, proposed TS 5.5.16, requires that the program include requirements for determining the unfiltered air inleakage past the CRE boundary into the CRE in accordance with the testing methods and at the frequencies specified in Sections C.1 and C.2 of

RG 1.197, Revision 0 (Reference 5). This guidance references ASTM E741 (Reference 2) as an acceptable method for ascertaining the unfiltered leakage into the CRE. The licensee has proposed to follow this method. Therefore, the proposed CRE inleakage measurement SR is acceptable.

3.4 IP2 and IP3 TS 5.5.16, CRE Habitability Program

The proposed administrative controls program TS is consistent with the model program TS in TSTF-448, Revision 3. In combination with IP2 SR 3.7.10.4 and IP3 SR 3.7.11.4, this program is intended to ensure the operability of the CRE boundary, which as part of an operable CRVS will ensure that CRE habitability is maintained such that CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under DBA conditions without personnel receiving radiation exposures in excess of 5 rem TEDE for the duration of the accident.

A CRE Habitability Program TS acceptable to the NRC staff contains the following elements:

- a. Definitions of CRE and CRE boundary. This element is intended to ensure that these definitions accurately describe the plant areas that are within the CRE, and also the interfaces that form the CRE boundary, and are consistent with the general definitions discussed in Section 2.1 of this safety evaluation. Establishing what is meant by the CRE and the CRE boundary will preclude ambiguity in the implementation of the program.
- b. Configuration control and preventive maintenance of the CRE boundary. This element is intended to ensure the CRE boundary is maintained in its design condition. Guidance for implementing this element is contained in RG 1.196 (Reference 4), which endorsed, with exceptions, NEI 99-03 (Reference 6). Maintaining the CRE boundary in its design condition provides assurance that its leak-tightness will not significantly degrade between CRE inleakage determinations.
- c. Assessment of CRE habitability at the frequencies stated in Sections C.1 and C.2 of RG 1.197, Revision 0 (Reference 5), and measurement of unfiltered air leakage into the CRE in accordance with the testing methods and at the frequencies stated in Sections C.1 and C.2 of RG 1.197. This element is intended to ensure that the plant assesses CRE habitability consistent with Sections C.1 and C.2 of RG 1.197. Assessing CRE habitability at the NRC accepted frequencies provides assurance that significant degradation of the CRE boundary will not go undetected between CRE inleakage determinations. Determination of CRE inleakage using test methods acceptable to the NRC staff assures that test results are reliable for ascertaining CRE boundary operability. Determination of CRE inleakage at the NRC accepted frequencies provides assurance that significant degradation of the CRE boundary will not occur between CRE inleakage determinations.
- d. Measurement of CRE pressure with respect to all areas adjacent to the CRE boundary at designated locations for use in assessing the CRE boundary at a frequency of 24 months on a staggered test basis (with respect to the CRVS trains). This element is intended to

ensure that CRE differential pressure is regularly measured to identify changes in pressure warranting evaluation of the condition of the CRE boundary. Obtaining and trending pressure data provides additional assurance that significant degradation of the CRE boundary will not go undetected between CRE leakage determinations.

- e. Quantitative limits on unfiltered leakage. This element is intended to establish the CRE leakage limit as the CRE unfiltered infiltration rate assumed in the CRE occupant radiological consequence analyses of DBAs. Having an unambiguous criterion for the CRE boundary to be considered operable in order to meet IP2 TS 3.7.10 and IP3 TS 3.7.11, will ensure that associated action requirements will be consistently applied in the event of CRE degradation resulting in leakage exceeding the limit.

The CRE habitability program proposed by the licensee, TS 5.5.16, states that the provisions of SR 3.0.2 are applicable to the program frequencies for performing the activities required by program paragraph number c, parts (i) and (ii) (assessment of CRE habitability and measurement of CRE leakage), and paragraph number d (measurement of CRE differential pressure). This statement is needed to avoid confusion. SR 3.0.2 is applicable to the surveillance that references the testing in the CRE Habitability Program. However, SR 3.0.2 is not applicable to Administrative Controls unless specifically invoked. Providing this statement in the program eliminates any confusion regarding whether SR 3.0.2 is applicable, and is acceptable.

The CRE habitability program proposed by the licensee, TS 5.5.16, states that (1) a CRE Habitability Program shall be established and implemented, (2) the program shall include all of the NRC-staff required elements, as described above, and (3) the provisions of SR 3.0.2 shall apply to program frequencies.

IP2 and IP3's proposed TS 5.5.16, "Control Room Envelope Habitability Program," contains the elements noted above and is consistent with the model program approved by the NRC staff in TSTF-448, Revision 3, and is therefore acceptable.

3.5 Implementation of New Surveillance and Assessment Requirements by the Licensee

The licensee has proposed license conditions regarding the initial performance of the new surveillance and assessment requirements. The new license conditions adopted the conditions in Section 2.3 of the model application published in the *Federal Register* on January 17, 2007 (72 FR 2022). Plant-specific changes were made to the proposed license conditions. The plant-specific license conditions are consistent with the model application, correctly establish the initial performance dates for the new surveillance and assessment requirements, and are therefore acceptable.

3.6 Requirement for CRVS Operability During Movement of Recently Irradiated Fuel Assemblies by IP3

The current IP3 TS 3.7.11 on CRVS does not require that CRVS be operable during movement of recently irradiated fuel assemblies. Per the IP3 analyses and the IP3 TS Bases, recently irradiated fuel assemblies have been part of a critical core within the last 84 hours. IP3 was previously approved to use the alternate source term of 10 CFR 50.67 for fuel-handling accidents in license amendment number 215, dated March 17, 2003 (ADAMS Accession No.

ML030760135), in which the dose to the control room occupants was considered. IP3 further updated their analyses of the dose to the control room occupants in their full-scope adoption of the alternate source term, license amendment 224, dated March 22, 2005 (ADAMS Accession No. ML050750431). The doses meet the criteria of 10 CFR 50.67. In this amendment, for consistency with IP2, the licensee proposed to add new Actions to IP3 TS 3.7.11 for when one or more CRVS trains are inoperable, as well as Actions due to an inoperable CRE boundary, during movement of recently irradiated fuel assemblies. The Actions proposed for these are consistent with TSTF-448, Revision 3, and require suspending movement of recently irradiated fuel assemblies if the CRE is inoperable or if both CRVS trains are inoperable. When only one CRVS train is inoperable, Actions consist of either suspending movement of recently irradiated fuel assemblies or placing the Operable train in pressurization mode. These changes, during movement of recently irradiated fuel assemblies, are acceptable since activities that can result in a potential accident are suspended if a complete loss of the safety function exists. When one train is inoperable, placing the Operable train in pressurization mode ensures that the safety function can be carried out if an accident occurs. As this is a more restrictive change, and the dose to the control room occupants has been previously demonstrated to meet the criteria of 10 CFR 50.67, the NRC staff finds this change acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes SRs. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (73 FR 15785). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. NRC GL 2003-01, "Control Room Habitability," dated June 12, 2003, (GL 2003-01).
2. ASTM-E-741-00, "Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution," 2000 (ASTM E741).
3. NRC Regulatory Issue Summary 2005-20, Revision 1: Revision To NRC Inspection Manual Part 9900 Technical Guidance, "Operability Determinations & Functionality Assessments For Resolution Of Degraded Or Nonconforming Conditions Adverse To Quality Or Safety," dated April 16, 2008 (RIS 2005-20).
4. Regulatory Guide 1.196, "Control Room Habitability at Light Water Nuclear Power Reactors," Revision 0, dated May 2003.
5. Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003.
6. NEI 99-03, "Control Room Habitability Assessment Guidance," Revision 0, dated June 2001.

Principal Contributors: A. Lewin
J. Boska

Date: December 22, 2008

December 22, 2008

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 NOS. 2 AND 3 - ISSUANCE OF
AMENDMENTS RE: CONTROL ROOM ENVELOPE HABITABILITY (TAC NOS.
MD7523 AND MD7524)

Dear Sir or Madam:

The Commission has issued the enclosed Amendment No. 258 to Facility Operating License No. DPR-26 for the Indian Point Nuclear Generating Unit No. 2 and Amendment No. 239 to Facility Operating License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated December 18, 2007, as supplemented by letters dated September 18, 2008, and October 28, 2008.

The amendments revise the TSs by adding a Control Room Habitability Program and revising the TS on the Control Room Ventilation System in accordance with Technical Specifications Task Force (TSTF) change traveler TSTF-448, "Control Room Habitability." License conditions are added regarding the initial performance of the new surveillance and assessment requirements.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly *Federal Register* notice.

Sincerely,

/ra/

John P. Boska, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-247 and 50-286

Enclosures:

1. Amendment No. 258 to DPR-26
2. Amendment No. 239 to DPR-64
3. Safety Evaluation

cc w/encls: Distribution via Listserv

DISTRIBUTION:

See next page

Amendment No.: ML083370142

OFFICE	LPL1-1/PM	LPL1-1/LA	AADB/BC	SCVB/BC	ITSB/BC
NAME	JBoska	SLittle	RTaylor	RDennig (per HW)	RElliott
DATE	12/5/08	12/9/08	12/4/08	12/8/08	12/15/08
OFFICE	OGC	LPL1-1/BC			
NAME	DRoth	MKowal			
DATE	12/19/08	12/22/08			

Official Record Copy

DATED: December 22, 2008

AMENDMENT NO. 258 TO FACILITY OPERATING LICENSE NO. DPR-26 INDIAN POINT
UNIT 2 AND AMENDMENT NO. 239 TO FACILITY OPERATING LICENSE NO. DPR-64
INDIAN POINT UNIT 3

DISTRIBUTION:

PUBLIC

LPL1-1 R/F

RidNrrDorl

RidsNrrDorlLpl1-1

RidsNrrDorlDpr

RidsNrrPMJBoska

RidsNrrLASLittle (paper copy)

RidsNrrDirsltsb

RidsRgn1MailCenter

RidsOGCRp

RidsAcrcAcnw&mMailCenter

cc: Distribution via Listserv