

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

ASHINGTON, D.C. 2000-00

October 3, 1994

Mr. William J. Cahill, Jr. Executive Vice President - Nuclear Generation Power Authority of the State of New York 123 Main Street White Plains, NY 10601

SUBJECT: ISSUANCE OF AMENDMENT FOR INDIAN POINT NUCLEAR GENERATING UNIT NO. 3 (TAC NO. M90055)

Dear Mr. Cahill:

The Commission has issued the enclosed Amendment No. 151 to Facility Operating License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3. The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated August 4, 1994.

The amendment revises Sections 3.4 and 3.5 of the TSs. The TS Section 3.4 revision reduces the maximum allowable percent of rated power associated with inoperable Main Steam Safety Valves (MSSVs). This change modifies Table 3.4-1 and the associated basis such that the maximum power level allowed for operation with inoperable MSSVs is below the heat removing capability of the operable MSSVs. The TS Section 3.5 revision corrects administrative errors in the action statements associated with Items 2.a and 2.c of Table 3.5-4. Additionally, the changes to Item 2.b of Table 3.5-3 and Item 2.b of Table 3.5-4 clarify the action statements associated with inoperable high containment pressure (Hi-Hi Level) instrumentation.

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

Sincerely,

S. 2 Communits

Nicola F. Conicella, Project Manager Project Directorate I-1 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

Docket No. 50-286

Enclosures: 1. Amendment No. 151to DPR-64 2. Safety Evaluation

cc w/encls: See next page

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Mr. William J. Cahill, Jr. Power Authority of the State of New York

cc:

Regional Administrator, Region I U.S. Nuclear Regulatory Commission 475 Allendale Road King of Prussia, PA 19406

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Mr. Leslie M. Hill Resident Manager Indian Point 3 Nuclear Power Plant P.O. Box 215 Buchanan, NY 10511

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Mr. Charles W. Jackson Manager, Nuclear Safety and Licensing Consolidated Edison Company of New York, Inc. Broadway and Bleakley Avenues Buchanan, NY 10511

Mayor, Village of Buchanan 236 Tate Avenue Buchanan, NY 10511

Mr. Richard L. Patch, Director Quality Assurance Power Authority of the State of New York 123 Main Street White Plains, NY 10601

Union of Concerned Scientists Attn: Mr. Robert D. Pollard 1616 P Street, NW, Suite 310 Washington, DC 20036 DATED: October 3, 1994

AMENDMENT NO. 151 TO FACILITY OPERATING LICENSE NO. DPR-64-INDIAN POINT UNIT 3 Docket File PUBLIC PDI-1 Reading S. Varga, 14/E/4 J. Zwolinski, 14/A/4 L. Marsh C. Vogan N. Conicella OGC D. Hagan, 3302 MNBB G. Hill (2), P1-22 C. Grimes, 11/F/23 M. Gareri ACRS (10) OPA OC/LFDCB PD plant-specific file C. Cowgill, Region I R. Jones, SRXB cc: Plant Service list

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UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

## POWER AUTHORITY OF THE STATE OF NEW YORK

## DOCKET NO. 50-286

### INDIAN POINT NUCLEAR GENERATING UNIT NO. 3

### AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 151 License No. DPR-64

- The Nuclear Regulatory Commission (the Commission) has found that: 1.
  - The application for amendment by Power Authority of the State Α. of New York (the licensee) dated August 4, 1994, 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;
  - The facility will operate in conformity with the application, **B**. the provisions of the Act, and the rules and regulations of the Commission:
  - There is reasonable assurance (i) that the activities authorized C. 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;
  - The issuance of this amendment will not be inimical to the common D. defense and security or to the health and safety of the public; and
  - The issuance of this amendment is in accordance with 10 CFR Part Ε. 51 of the Commission's regulations and all applicable requirements have been satisfied.
- Accordingly, the license is amended by changes to the Technical 2. 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:

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(2) <u>Technical Specifications</u>

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 151, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

LB March

Ledyard B. Marsh, Director Project Directorate I-1 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: October 3, 1994

## ATTACHMENT TO LICENSE AMENDMENT NO. 151

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## FACILITY OPERATING LICENSE NO. DPR-64

## DOCKET NO. 50-286

Revise Appendix A as follows:

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| <u>Remove Pages</u>        | <u>Insert Pages</u>        |
|----------------------------|----------------------------|
| 3.4-3                      | 3.4-3                      |
| 3.4-4                      | 3.4-4                      |
| Table 3.4-1                | Table 3.4-1                |
| Table 3.5-3 (sheet 2 of 3) | Table 3.5-3 (sheet 2 of 3) |
| Table 3.5-3 (sheet 3 of 3) | Table 3.5-3 (sheet 3 of 3) |
| Table 3.5-4 (sheet 1 of 2) | Table 3.5-4 (sheet 1 of 2) |
| Table 3.5-4 (sheet 2 of 2) | Table 3.5-4 (sheet 2 of 2) |

If the above action cannot be taken, then:

a) maintain the plant in a safe stable mode which minimizes the potential for a reactor trip,

and

b) continue efforts to restore water supply to the auxiliary feedwater system,

and

c) notify the NRC within 24 hours regarding planned corrective action.

#### <u>Basis</u>

A reactor shutdown from power requires removal of core decay heat. Immediate decay heat removal requirements are normally satisfied by the steam bypass to the condensers. Thereafter, core decay heat can be continuously dissipated via the steam bypass to the condenser as feedwater in the steam generator is converted to steam by heat absorption. Normally, the capability to feed the steam generators is provided by operation of the turbine cycle feedwater system.

The twenty main steam safety valves have a total combined rated capability of 15,108,000 lbs/hr. The total full power steam flow is 12,974,500 lbs/hr.; therefore twenty (20) main steam safety valves will be able to relieve the total steam flow if necessary. The total relieving capacity of the twenty main steam line safety valves is 116% of the total secondary steam flow at 100% rated power (3025 Mwt). The specified valve lift settings and relieving capacities are in accordance with the requirements of Section III of the ASME Boiler and Pressure Code, 1971 Edition. The operability of the twenty main steam line safety valves ensure that the secondary system pressure will be limited to within 110% of the design pressure of 1085 psig during the most severe anticipated system operational transient.

Startup and/or power operation with inoperable main steam line safety valves is allowable within the limitation of Table 3.4-1. Operation with up to three of the five main steam line safety valves per steam generator inoperable is permissible if the maximum allowed power level is below the heat removing capability of the operable MSSVs. This is accomplished by restricting the reactor power level such that the heat input from the primary side will not exceed the heat removing capability of the operable MSSVs of the most limiting steam generator. The reduction in reactor power level is achieved by reducing the power range neutron flux high setpoint. The reactor trip setpoint reductions are derived on the following basis:

$$Hi\phi = (100 / Q) [(w_sh_{fs}N) / K]$$

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3.4-3

Where:

- $Hi\phi$  Safety Analysis power range high neutron flux setpoint, percent.
- Q Nominal NSSS power rating of the plant (including reactor coolant pump heat) in Mwt (3037 Mwt).

- ws = Minimum total steam flow rate capability of the operable MSSVs on any one steam generator at the highest MSSV opening pressure, including tolerance and accumulation, as appropriate, in lb/sec. (ws = 150 + 228.61 \* (4 - V) lb/sec, where V = Number of inoperable safety valves in the steam line of the most limiting steam generator).
- h<sub>fg</sub> = Heat of vaporization for steam at the highest MSSV opening pressure including tolerance and accumulation, as appropriate, Btu/lbm (608.5 Btu/lbm).
- N Number of loops in plant (4).

In the unlikely event of complete loss of electrical power to the station, decay heat removal would continue to be assured by the availability of either the steam-driven auxiliary feedwater pump or one of the two motordriven auxiliary steam generator feedwater pumps and steam discharge to the atmosphere via the main steam safety valves and atmospheric relief valves. One motor-driven auxiliary feedwater pump can supply sufficient feedwater for removal of decay heat from the plant. The minimum amount of water in the condensate storage tank is the amount needed for 24 hours at hot shutdown. When the condensate storage supply is exhausted, city water will be used.

Two steam generators capable of performing their heat transfer function will provide sufficient heat removal capability to remove core decay heat after a reactor shutdown.

The limitations placed on turbine-generator electrical output due to conditions of turbine overspeed setpoint, number of operable steam dump lines, and condenser back pressure are established to assure that turbine overspeed (during conditions of loss of plant load) will be within the design overspeed value considered in the turbine missile analysis. <sup>(2)</sup> In the preparation of Figures 3.4-1 and 3.4-2, the specified number of operable L.P. steam dump lines is shown as one (1) greater than the minimum number required to act during a plant trip. The limitations on electrical output, as indicated in Figures 3.4-1 and 3.4-2, thus consider the required performance of the L.P. Steam Dump System in the event of a single failure for any given number of operable dump lines.

3.4-4

Amendment No. 29, 91, 92, 151

### TABLE 3.4-1

| MAXIMUM ALLOWABLE POWER RANGE NEUTRON FLUX HIGH<br>SETPOINT WITH INOPERABLE STEAM LINE SAFETY VALVES |                                                                                        |  |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|--|--|--|--|--|--|--|
| Number of Inoperable<br>Safety Valves Per<br>Limiting Steam<br>Generator*                            | Maximum Allowable Power<br>Neutron Flux High Set-<br>Point (Percent of Rated<br>Power) |  |  |  |  |  |  |  |
| 1                                                                                                    | 61                                                                                     |  |  |  |  |  |  |  |
| 2                                                                                                    | 42                                                                                     |  |  |  |  |  |  |  |
| 3                                                                                                    | 23                                                                                     |  |  |  |  |  |  |  |

\*Limiting Steam Generator is that Generator with greatest number of inoperable safety valves.

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| INSTRUMENTATION OPERATING CONDITION FOR ENGINEERED SAFETY FEATURES |                         |                                    |                                             |                                      |                                                                                |  |  |  |  |
|--------------------------------------------------------------------|-------------------------|------------------------------------|---------------------------------------------|--------------------------------------|--------------------------------------------------------------------------------|--|--|--|--|
| No. FUNCTIONAL UNIT                                                | 1<br>NO. OF<br>CHANNELS | 2<br>NO. OF<br>CHANNELS<br>TO TRIP | 3<br>MIN. NUMBER<br>OF OPERABLE<br>CHANNELS | 4<br>MIN. DEGREE<br>OF<br>REDUNDANCY | 5<br>OPERATOR ACTION IF<br>CONDITIONS OF COL. 3 OR 4<br>CANNOT BE MET (Note 6) |  |  |  |  |
| 2. CONTAINMENT SPRAY                                               |                         |                                    |                                             |                                      |                                                                                |  |  |  |  |
| a. Manual                                                          | 2                       | 2                                  | 2                                           | 0 (Note 4)                           | Cold Shutdown                                                                  |  |  |  |  |
| b. High Containment<br>Pressure (Hi Hi<br>Level)                   | 2 sets<br>of 3          | 2 of 3<br>in each<br>set           | 2 per set                                   | l/set                                | Cold Shutdown (Note 8)                                                         |  |  |  |  |
| 3. AUXILIARY FEEDWATER                                             |                         |                                    |                                             |                                      |                                                                                |  |  |  |  |
| a. Stm. Gen. Water<br>Level-Low-Low                                |                         |                                    |                                             |                                      |                                                                                |  |  |  |  |
| i. Start Motor<br>Driven Pumps                                     | 3/stm.<br>gen.          | 2 in any<br>stm. gen.              | 2 chan. in<br>each stm.<br>gen.             | 1                                    | Reduce system temperature such that $T \leq 350^{\circ}F$                      |  |  |  |  |
| ii. Start Turbine-<br>Driven Pump                                  | 3/stm.<br>gen.          | 2/3 in<br>each of 2<br>stm. gen.   | 2 chan. in<br>each stm.<br>gen.             | 1                                    | T ≤ 350°F                                                                      |  |  |  |  |
| b. S.I. Start<br>Motor-Driven<br>Pumps                             | (A11                    | safety                             | injection                                   | initiating                           | functions and requirements)                                                    |  |  |  |  |
| c. Station Blackout<br>Start Turbine-<br>Driven Pump               | 2                       | 1                                  | 1                                           | 0                                    | T ≤ 350°F                                                                      |  |  |  |  |
| d. Trip of Main<br>Feedwater Pumps<br>Start Motor-<br>Driven Pumps | 2                       | 1                                  | 1                                           | 0                                    | Hot Shutdown                                                                   |  |  |  |  |

TABLE 3.5-3 (Sheet 2 of 3)

Amendment No. 28, 38, 223, 151

| INSTRUMENTATION OPERATING CONDITION FOR ENGINEERED SAFETY FEATURES |                         |                                    |                                          |                                      |                                                                                |  |  |  |  |
|--------------------------------------------------------------------|-------------------------|------------------------------------|------------------------------------------|--------------------------------------|--------------------------------------------------------------------------------|--|--|--|--|
| No. FUNCTIONAL UNIT                                                | 1<br>NO. OF<br>CHANNELS | 2<br>NO. OF<br>CHANNELS<br>TO TRIP | 3<br>MIN. NUMBER OF<br>OPERABLE CHANNELS | 4<br>MIN. DEGREE<br>OF<br>REDUNDANCY | 5<br>OPERATOR ACTION IF<br>CONDITIONS OF COL. 3 OR<br>4 CANNOT BE MET (Note 6) |  |  |  |  |
| 4. LOSS OF POWER<br>a. 480v Bus<br>Undervoltage Relay              | 2/bus                   | 1/bus                              | 1/bus                                    | 0                                    | See Note 1                                                                     |  |  |  |  |
| b. 480v Bus Degraded<br>Voltage Relay                              | 2/bus                   | 2/bus                              | 2/bus (See Note 2)                       | 0                                    | See Note 1                                                                     |  |  |  |  |
| 5. OVERPRESSURE PRO-<br>TECTION SYSTEM (OPS)                       | 3                       | 2                                  | 2                                        | 1                                    | See Note 7                                                                     |  |  |  |  |

TABLE 3.5-3 (Sheet 3 of 3)

- Note 1. If the 138KV and 13.8KV sources of offsite power are available and the conditions of column 3 or 4 cannot be met within 72 hours, then the requirements of 3.7.C.1 or 2 shall be met.
- Note 2. If one channel becomes inoperable, it is placed in the trip position and the minimum number of operable channels is reduced by one.
- Note 3. Permissible to bypass if reactor coolant pressure is less than 2000 psig.
- Note 4. Must actuate 2 switches simultaneously.
- Note 5. The Minimum Number of Operable Channels and the Minimum Degree of Redundancy may be reduced to zero if the SI bypass is in the unblocked position.
- Note 6. If the condition of Column 3 or 4 cannot be met, the reactor shall be placed in the hot shutdown condition, utilizing normal operating procedures, within 4 hours of the occurrence. If the conditions are not met within 24 hours of the occurrence, the reactor shall be placed in the cold shutdown condition, or the alternate condition, if applicable, within an additional 24 hours.
- Note 7. Refer to Specification 3.1.A.8.
- Note 8. Main steam isolation values may be closed in lieu of going to cold shutdown if the circuitry associated with closing the values is the only portion inoperable.

Amendment No. 38, 44, 84, 87, 223, 151

TABLE 3.5-4 (Sheet 1 of 2)

| INSTRUMENT OPERATING CONDITIONS FOR ISOLATION FUNCTIONS                                                        |                    |                               |                              |                                 |                                                                        |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|------------------------------|---------------------------------|------------------------------------------------------------------------|--|--|--|--|--|
| 1 2 3 4 5                                                                                                      |                    |                               |                              |                                 |                                                                        |  |  |  |  |  |
| No. FUNCTIONAL UNIT                                                                                            | NO. OF<br>CHANNELS | NO. OF<br>CHANNELS<br>TO TRIP | MIN.<br>OPERABLE<br>CHANNELS | MIN. DEGREE<br>OF<br>REDUNDANCY | OPERATOR ACTION IF<br>CONDITIONS IN COLUMN 3<br>OR 4 CANNOT BE MET     |  |  |  |  |  |
| 1. CONTAINMENT ISOLATION                                                                                       |                    |                               |                              |                                 |                                                                        |  |  |  |  |  |
| a. Automatic Safety Injection<br>(Phase A)                                                                     | See Item           | No. 1(b)                      | of Table                     | 3.5-3                           | Cold Shutdown<br>(see note 1)                                          |  |  |  |  |  |
| b. Containment Pressure<br>(Phase B)                                                                           | See Item           | No. 2(b)                      | of Table                     | 3.5-3                           | Cold Shutdown<br>(see note 1)                                          |  |  |  |  |  |
| c. Manual                                                                                                      |                    |                               |                              |                                 |                                                                        |  |  |  |  |  |
| Phase A                                                                                                        | 2                  | 1                             | 1                            | 0                               | Cold Shutdown<br>(see note 1)                                          |  |  |  |  |  |
| Phase B                                                                                                        | See Item           | No. 2(a)                      | of Table                     | 3.5-3                           | Cold Shutdown<br>(see note 1)                                          |  |  |  |  |  |
| 2. STEAM LINE ISOLATION                                                                                        |                    |                               |                              |                                 |                                                                        |  |  |  |  |  |
| a. High Steam Flow in 2/4<br>Steam Lines Coincident<br>with Low T <sub>avg</sub> or Low Steam<br>Line Pressure | See Item           | No. 1(e)                      | of Table                     | 3.5-3                           | Cold Shutdown or Main<br>Steam Isolation Valves<br>Closed (see note 1) |  |  |  |  |  |
| b. High Containment Pressure<br>(Hi Hi Level)                                                                  | See item           | No. 2(b)                      | of Table                     | 3.5-3                           | Cold Shutdown<br>(see notes 1 and 2)                                   |  |  |  |  |  |
| c. Manual                                                                                                      | 1/loop             | 1/loop                        | 1/loop                       | 0                               | Cold Shutdown or Main<br>Steam Isolation Valves<br>Closed (see note 1) |  |  |  |  |  |

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TABLE 3.5-4 (Sheet 2 of 2)

|      |                                                                                                | 1                  | 2                             | 3                            | 4                               | 5                                                                          |
|------|------------------------------------------------------------------------------------------------|--------------------|-------------------------------|------------------------------|---------------------------------|----------------------------------------------------------------------------|
| No.  | FUNCTIONAL UNIT                                                                                | NO. OF<br>CHANNELS | NO. OF<br>CHANNELS<br>TO TRIP | MIN.<br>OPERABLE<br>CHANNELS | MIN. DEGREE<br>OF<br>REDUNDANCY | OPERATOR ACTION IF<br>CONDITIONS IN COLUMN 3 OR 4<br>CANNOT BE MET         |
| 3.   | FEEDWATER LINE ISOLATION                                                                       |                    |                               |                              |                                 |                                                                            |
| a.   | Safety Injection                                                                               | See                | Item                          | No. 1                        | of                              | Table 3.5-3                                                                |
| 4.   | CONTAINMENT VENT AND PURGE                                                                     |                    |                               |                              |                                 |                                                                            |
| a.   | Containment Radioactivity<br>High (R11 and R12 monitor)                                        | 2                  | 1                             | 1                            | 0                               | close all containment vent<br>and purge valves when above<br>cold shutdown |
| 5.   | PLANT EFFLUENT<br>RADIOIODINE/PARTICULATE<br>SAMPLING (sample line<br>common with monitor R13) | 1                  | NA                            | 1                            | 0                               | (see note 3)                                                               |
| 6.   | Main Steam Line Radiation<br>Monitors                                                          | 1/line             | NA                            | 1/line                       | 0                               | (see note 3)                                                               |
| 7.   | Wide Range Plant Vent<br>Monitor (R27)                                                         | 1                  | NA                            | 1                            | 0                               | (see note 3)                                                               |
| NOTE |                                                                                                |                    |                               |                              |                                 |                                                                            |

- 1. If the conditions of Columns 3 or 4 cannot be met, the reactor shall be placed in the hot shutdown condition, utilizing normal operating procedures, within 4 hours of the occurrence. If the conditions are not met within 24 hours of the occurrence, the reactor shall be placed in the cold shutdown condition, or the alternate condition if applicable, within an additional 24 hours.
- 2. Main steam isolation values may be closed in lieu of going to cold shutdown if the circuitry associated with closing the values is the only portion inoperable.
- 3. If the plant vent sampling capability, the wide-range vent monitor or the main steam line radiation monitors is/are: determined to be inoperable when the reactor is above the cold shutdown condition, then restore the sampling/monitoring capability within 72 hours or:
  - a) Initiate a pre-planned alternate sampling/monitoring capability as soon as practical, but no later than 72 hours after identification of the failures. If the capability is not restored to operable status within 7 days, then,
  - b) Submit a Special Report to the NRC pursuant to Technical Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system.

Amendment No. 28, 44, 85, 151



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

# SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION RELATED TO AMENDMENT NO. 151 TO FACILITY OPERATING LICENSE NO. DPR-64 POWER AUTHORITY OF THE STATE OF NEW YORK INDIAN POINT NUCLEAR GENERATING UNIT NO. 3

## DOCKET NO. 50-286

## 1.0 INTRODUCTION

By letter dated August 4, 1994, the Power Authority of the State of New York (the licensee) submitted a request for changes to the Indian Point Nuclear Generating Unit No. 3 (IP3) Technical Specifications (TSs). The requested changes would revise Sections 3.4 and 3.5 of the TSs. The TS Section 3.4 revision reduces the maximum allowable percent of rated power associated with inoperable Main Steam Safety Valves (MSSVs). This change modifies Table 3.4-1 and the associated basis such that the maximum power level allowed for operation with inoperable MSSVs is below the heat removing capability of the operable MSSVs. The TS Section 3.5 revision corrects administrative errors in the action statements associated with Items 2.a and 2.c of Table 3.5-4. Additionally, the changes to Item 2.b of Table 3.5-3 and Item 2.b of Table 3.5-4 clarify the action statements associated with inoperable high containment pressure (Hi-Hi Level) instrumentation.

### 2.0 EVALUATION

TS 3.4.A.1.a allows the plant to operate at a reduced power level with a reduced number of operable MSSVs. The reduced power level associated with 1, 2, and 3 inoperable MSSVs per limiting steam generator is provided by TS Table 3.4-1. Westinghouse identified a deficiency in the basis for these reduced levels that potentially applied to several plants. As a result, NSAL-94-001, dated January 20, 1994, "Operation at Reduced Power Levels with Inoperable Main Steam Safety Valves" was issued. The deficiency was in the assumption that the maximum allowable initial power level is a linear function (the linear function is identified in the Bases of Section 3.4) of the available MSSV relief capacity. Under certain conditions and with typical safety analysis assumptions, a Loss of Load/Turbine Trip (LOL/TT) transient from partial power conditions may result in overpressurization of the main steam system when operating in accordance with this TS.

The LOL/TT event is analyzed to show that core protection margins are maintained, the Reactor Coolant System will not overpressurize, and the main steam system will not overpressurize. The analysis verifies that the MSSV capacity is sufficient to prevent secondary side pressure from exceeding 110 percent of the design pressure.

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The analysis only analyzes the LOL/TT transient from the full power initial condition, with cases examining the effects of assuming primary side pressure control and different reactivity feedback conditions. With fully operational MSSVs, it can be demonstrated that overpressure protection is provided for all initial power levels. However, TS 3.4.A.1.a allows operation with a reduced number of operable MSSVs at a reduced power level as determined by resetting the power range high neutron flux setpoint. This TS is not based on a detailed analysis, but rather on the assumption that the maximum allowable initial power level is a linear function of the available MSSV relief capacity. Recently, Westinghouse has determined that this assumption is not valid because at lower initial power levels a reactor trip may not be actuated early in the transient. An overtemperature  $\Delta T$  trip is not generated since the core thermal margins are increased at lower power levels. A high pressurizer pressure trip is not generated if the primary pressure control systems function normally. This results in a longer time during which primary heat is transferred to the secondary side. The reactor eventually trips on low steam generator water level, but this may not occur before steam pressure exceeds 110 percent of the design value if one or more MSSVs are inoperable in accordance with the current TSs.

This proposed TS change would modify Table 3.4-1 and the associated basis such that the maximum power level allowed for operation with inoperable MSSVs is below the heat removing capability of the operable MSSVs. The new algorithm used to calculate the maximum power levels associated with inoperable MSSVs ensures that the heat removing capability of the operable MSSVs will exceed the heat produced at the maximum power levels allowed for operation with inoperable MSSVs. This new algorithm results in the maximum allowed power range high neutron flux setpoint associated with 1, 2, or 3 inoperable MSSVs per limiting steam generator (maximum allowable power levels) being below those currently allowed by the TSs. Therefore, the proposed TS change will be more conservative than the current TSs.

In addition to revising the allowable percent of rated power associated with inoperable MSSVs, this application corrects administrative errors in the action statements (Column 5) associated with Items 2.a and 2.c of Table 3.5-4. These errors were introduced by License Amendment 44 when reformatting of the Table resulted in an inadvertent change to the text in 2.a, 2.b, and 2.c. The corrections will restore the original intent of the TSs. The action statements associated with Item 2.b of Table 3.5-4 and Item 2.b of Table 3.5-3 are being clarified to make it more clear that the plant will be placed in cold shutdown condition if the minimum number of operable channels or the minimum degree of redundancy requirements for instrumentation associated with high containment pressure (Hi-Hi Level) cannot be met.

In summary, the proposed changes will modify Table 3.4-1 and the associated basis such that the maximum power level allowed for operation with inoperable MSSVs is below the heat removing capability of the operable MSSVs. This TS change will be more conservative than the current TSs. Additionally, the changes to Items 2.a and 2.c of Table 3.5-4 would restore the original intent

of the specifications. Also, the changes to Item 2.b of Table 3.5-3 and Item 2.b of Table 3.5-4 will clarify the action statements associated with inoperable high containment pressure (Hi-Hi Level) instrumentation. Thus, based on the information provided by the licensee, the NRC staff finds all of the above proposed changes to be acceptable.

#### 3.0 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.

#### 4.0 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. 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 (59 FR 45031). 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.

#### 5.0 <u>CONCLUSION</u>

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.

Principal Contributor: Mario C. Gareri

**Date:** October 3, 1994

Mr. William J. Cahill, Jr. Executive Vice President - Nuclear Generation Power Authority of the State of New York 123 Main Street White Plains, NY 10601

SUBJECT: ISSUANCE OF AMENDMENT FOR INDIAN POINT NUCLEAR GENERATING UNIT NO. 3 (TAC NO. M90055)

Dear Mr. Cahill:

The Commission has issued the enclosed Amendment No. 151 to Facility Operating License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3. The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated August 4, 1994.

The amendment revises Sections 3.4 and 3.5 of the TSs. The TS Section 3.4 revision reduces the maximum allowable percent of rated power associated with inoperable Main Steam Safety Valves (MSSVs). This change modifies Table 3.4-1 and the associated basis such that the maximum power level allowed for operation with inoperable MSSVs is below the heat removing capability of the operable MSSVs. The TS Section 3.5 revision corrects administrative errors in the action statements associated with Items 2.a and 2.c of Table 3.5-4. Additionally, the changes to Item 2.b of Table 3.5-3 and Item 2.b of Table 3.5-4 clarify the action statements associated with inoperable high containment pressure (Hi-Hi Level) instrumentation.

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

Sincerely,

Original signed by:

Nicola F. Conicella, Project Manager Project Directorate I-1 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

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Docket No. 50-286

Enclosures: 1. Amendment No. 151 to DPR-64 2. Safety Evaluation

cc w/encls: See next page

\*See previous concurrence

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