March 3, 1986

Docket No. 50-247

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Mr. John D. O'Toole
Vice President
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Dear Mr. O'Toole:

SUBJECTS: AMENDMENTS NO. 101, 102, 104 AND 109 TO THE INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

Due to administrative errors Amendments No. 101, 102, 104 and 109 were issued with incorrect pages.

Amendment 101 page 3.1.F-1 was issued without incorporating a change made in Amendment 85.

Amendment 102 was issued with Table 3-5. The table should be 3.5.5.

Amendment 105 was issued incorrectly including a reference to the BIT deleted in Amendment 104.

Amendment 109 was issued with page 3.3-17. This page should have been 3.3-14.

Copies of the correct pages are enclosed.

Sincerely,

/s/MSlosson

Marylee M. Slosson, Project Manager
PWR Project Directorate No. 3
Division of PWR Licensing-A

Enclosure:
As stated

cc w/enclosure:
See next page

PAD-3	PAD-3 MMS	D/PAD-3
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03/3/86	03/3/86	03/4/86

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3.1.F. REACTOR COOLANT SYSTEM LEAKAGE AND LEAKAGE INTO THE CONTAINMENT FREE VOLUME

Specification

1. LEAKAGE DETECTION AND REMOVAL SYSTEMS

a. The reactor shall not be brought above cold shutdown unless the following leakage detection and removal systems are operable:

(1) Two containment sump pumps.
(2) Two containment sump level monitors.
(3) A containment sump discharge line flow monitoring system.
(4) Two recirculation sump level monitors.
(5) Two reactor cavity level monitors.
(6) Two of the following three systems:
  (a) A containment atmosphere gaseous radioactivity monitoring system.
  (b) A containment atmosphere particulate radioactivity monitoring system.
  (c) The containment fan cooler condensate flow monitoring system.

b. When the reactor is above cold shutdown, the requirements of specification 3.1.F.1.a. may be modified as follows:

(1) One containment sump pump may be inoperable for a period not to exceed seven (7) consecutive days provided that on a daily basis the other containment sump pump is started and discharge flow is verified.

(2) One of the two required containment sump level monitors may be inoperable for a period not to exceed seven (7) consecutive days.

(3) The containment sump discharge line flow monitoring system may be inoperable for a period not to exceed seven (7) consecutive days provided a detailed Waste Holdup Tank water inventory balance is performed daily.

(4) One of the two required recirculation sump level monitors may be inoperable for a period not to exceed fourteen (14) consecutive days.

(5) One of the two required reactor cavity level monitors may be inoperable for a period not to exceed thirty (30) consecutive days.

TABLE 3.5.5

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM NO. OF CHANNELS OPERABLE[a]	APPLICABLE ACTIONS
1. Pressurizer Water Level	2	1
2. Reactor Coolant System Subcooling Margin Monitor	1[**]	1,2
3. PORV Position Indicator (Limit Switch)	1/valve[***]	1
4. PORV Block Valve Position Indicator (Limit Switch)	1/valve[****]	1
5. Safety Valve Position Indicator (Acoustic Monitor)	1/valve	1
6. Auxiliary Feedwater Flow Rate	1/S.G.[*****]	1
7. Wide Range Containment Pressure Monitor (PT-3300, PT-3301)	1	3
8. Plant Vent Noble Gas Effluent Monitor(R-27)	1	3
9. Main Steam Line Radiation Monitor (R-28,R-29,R-30,R-31)	1/steam line	3
10. High Range Containment Radiation Monitor (R-25, R-26)	1	3
11. Containment Hydrogen Concentration Monitor	2	3

Amendment No. 102

TABLE 3.5.5 (Continued)

Footnotes:

* Encompasses the entire channel from sensor to display where either an indicator, recorder or alarm is acceptable.

** PROTEUS Subcooling margin readout can be used as substitute for the subcooling monitor.

*** Except at times when the associated block valve is closed and de-energized. Acoustic monitoring of PORV position (headered discharge) can be used as a substitute for the PORV Position Indicator-Limit Switches instrument.

**** Except at times when the block valve is closed and de-energized.

***** Steam Generator Level instrumentation can be used as a substitute for auxiliary feedwater flow rate monitoring.

TABLE 3.5.5 (Continued)

ACTION STATEMENTS

1. With the number of operable accident monitoring instrumentation channels less than the minimum channels operable requirement of Table 3-5, restore the inoperable instrument channel(s) to operable status within 7 days and/or recorder(s) within 14 days. If the minimum number of channels required is not restored to meet the above requirements within the time periods specified, then:

   a. If the reactor is critical, it shall be brought to the hot shutdown condition utilizing normal operating procedures. The shutdown shall start no later than at the end of the specified time period.

   b. If the requirements are not satisfied within an additional 48 hours after hot shutdown, the reactor shall be cooled to below 350°F utilizing normal operating procedures. The cooldown shall start no later than the end of the 48 hour period.

2. If the subcooling margin monitor is inoperable for more than seven (7) days, plant operation may continue for an additional thirty (30) days provided that steam tables are continously maintained in the control room and the subcooling margin is determined and recorded once a shift.

3. With the number of operable channels less than required by the minimum number of channels requirement, within 7 days either restore the inoperable channel(s) to the minimum operable status or:

   a. Initiate an alternate method of monitoring the appropriate parameter(s), and

   b. Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2.j within the next 14 days following the event.

3. One channel of heat tracing for the flow path from the boric acid storage system to the Reactor Coolant System may be out of service provided the failed channel is restored to an operable status within 7 days and the redundant channel is demonstrated to be operable daily during that period.

4. Both channels of heat tracing for the flow path from the boric acid storage system to the Reactor Coolant System may be out of service provided at least one channel is restored to operable status within 48 hours, the required flow path is shown to be clear of blockage, and the second channel is restored to operable status within 7 days.

D. When RCS temperature is less than or equal to 295°F, the requirements of Table 3.1.A-2 regarding the number charging pumps allowed to be energized shall be adhered to.

Basis

The Chemical and Volume Control System provides control of the Reactor Coolant System boron inventory. This is normally accomplished by using any one of the three charging pumps in series with either one of the two boric acid transfer pumps. An alternate method of boration will be to use the charging pumps taking suction directly from the refueling water storage tank.

A third method will be to depressurize and use the safety injection pumps. There are three sources of borated water available for injection through 3 different paths.

(1) The boric acid transfer pumps can deliver the contents of the boric acid storage system to the charging pumps.

(2) The charging pumps can take suction from the refueling water storage tank. (2000 ppm boron solution). Reference is made to Technical Specification 3.3.A.

(3) The safety injection pumps can take their suction from either the refueling water storage tank.

The quantity of boric acid in storage from either the boric acid storage system or the refueling water storage tank is sufficient to borate the reactor coolant in order to reach cold shutdown at any time during core life.

Approximately 4000 gallons of the 11 1/2% to 13% by weight (20,000 ppm to 22,500 ppm of boron) of boric acid are required to meet cold shutdown conditions.

Thus, a minimum of 4400 gallons in the boric acid storage system is specified. An upper concentration limit of 13% (22,500 ppm of boron) boric acid in the boric acid storage system is specified to maintain solution solubility at the specified low temperature limit of 145°F. One of two channels of heat tracing is sufficient to maintain the specified low

The seven day out of service period for the Cold Channel and Penetration Pressurization System and the Isolation Valve Seal Water System is allowed because no credit has been taken for operation of these systems in the calculation of off-site accident doses should an accident occur. No other safeguards systems are dependent on operation of these systems.(13) The minimum pressure settings for the IVSWS and RC & PPS during operation assures effective performance of these systems for the maximum containment calculated peak accident pressure of 47 psig.

References

(1) FSAR Section 9
(2) FSAR Section 6.2
(3) FSAR Section 6.2
(4) FSAR Section 6.3
(5) FSAR Section 14.3.5
(6) FSAR Section 1.2
(7) FSAR Section 8.2
(8) FSAR Section 9.6.1
(9) FSAR Section 14.3
(10) Indian Point Unit No. 2, "Analysis of the Emergency Core Cooling System in Accordance with the Acceptance Criteria of 10 CFR 50.46 and 10 CFR Part 50, Appendix K", dated April, 1985.

(11) Letter from William J. Cahill, Jr. of Consolidated Edison Company of New York, to Robert W. Reid of the Nuclear Regulatory Commission, dated July 13, 1976. Indian Point Unit No. 2 Small Break LOCA Analysis.

(12) Indian Point Unit No. 3 FSAR Sections 6.2 and 6.3 and the Safety Evaluation accompanying "Application for Amendment to Operating License" sworn to by Mr. William J. Cahill, Jr. on March 28, 1977.

(13) FSAR Sections 6.5 and 6.6.