



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

August 4, 1993

Docket No. 50-286

Mr. Ralph E. Beedle
Executive Vice President - Nuclear Generation
Power Authority of the State of New York
123 Main Street
White Plains, New York 10601

Dear Mr. Beedle:

SUBJECT: ISSUANCE OF AMENDMENT FOR INDIAN POINT NUCLEAR GENERATING
UNIT NO. 3 (TAC NO. M85694)

The Commission has issued the enclosed Amendment No. 137 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 (TS) in response to your application transmitted by letter dated January 25, 1993.

The amendment revises the Technical Specifications (Appendix A) and the Environmental Technical Specifications (Appendix B) to incorporate the changes listed below:

- (1) The frequency of process and area radiation monitor calibration (specified in Appendix A Table 4.1-1 and Appendix B Tables 3.1-1 and 3.2-1) has been changed to accommodate operation on a 24-month cycle.
- (2) The frequency of radioactivity recorder calibration (specified in Appendix B Table 3.1-1) has been changed to accommodate operation on a 24-month cycle.

These changes followed the guidance provided in Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," as applicable.

In addition, the following administrative changes have been incorporated:

- (1) Appendix A Table 4.1-1 has been changed to identify and specify each radiation monitor by its appropriate tag number and the table has been reformatted for consistency.
- (2) Appendix B Tables 3.1-1 and 3.2-1 have been changed to identify and specify each radiation monitor by its appropriate tag number.
- (3) Appendix B Tables 2.1-1 and 3.1-1 have been changed to clarify monitoring requirements for the condensate polisher waste release path. In addition, Appendix B Table 2.1-1 has been reformatted for consistency.

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Mr. Ralph E. Beedle

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August 4, 1993

- (4) Appendix A Table 4.1-1 and Appendix B Table 3.1-1 have been changed to clearly indicate that the surveillance requirement for monitors R-25/26 and R-23 will remain as once per 18 months.
- (5) The Bases for Appendix A Section 3.3 has been changed to clarify the control room ventilation radiation monitoring 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,



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

Enclosures:

1. Amendment No. 137 to DPR-64
2. Safety Evaluation

cc w/enclosures:

See next page

Mr. Ralph E. Beedle
Power Authority of the State
of New York

Indian Point Nuclear Generating
Station Unit No. 3

cc:

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DATED: August 4, 1993

AMENDMENT NO. 137 TO FACILITY OPERATING LICENSE NO. DPR-64-INDIAN POINT UNIT 3

Docket File

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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. 137
License No. DPR-64

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Power Authority of the State of New York (the licensee) dated January 25, 1993, 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. 137, 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



Robert A. Capra, 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: August 4, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 137

FACILITY OPERATING LICENSE NO. DPR-64

DOCKET NO. 50-286

Revise Appendix A as follows:

Remove Pages

3.3-20
Table 4.1-1 (sheet 1 of 6)
Table 4.1-1 (sheet 2 of 6)
Table 4.1-1 (sheet 3 of 6)
Table 4.1-1 (sheet 4 of 6)
Table 4.1-1 (sheet 5 of 6)
N/A

Insert Pages

3.3-20
Table 4.1-1 (sheet 1 of 6)
Table 4.1-1 (sheet 2 of 6)
Table 4.1-1 (sheet 3 of 6)
Table 4.1-1 (sheet 4 of 6)
Table 4.1-1 (sheet 5 of 6)
Table 4.1-1 (sheet 6 of 6)

Revise Appendix B Part II as follows:

Remove Pages

2.1-2
3.1-2
3.1-3
3.2-2
3.2-3

Insert Pages

2.1-2
3.1-2
3.1-3
3.2-2
3.2-2

Auxiliary Component Cooling Pumps are provided to deliver cooling water for the two Recirculation Pumps located inside the containment. Each recirculation pump is fed by two Auxiliary Component Cooling Pumps. A single Auxiliary Component Cooling Pump is capable of supplying the necessary cooling water required for a recirculation pump during the recirculation phase following a loss-of-coolant accident.

The control room ventilation is designed to filter the control room atmosphere for intake air and/or for recirculation during control room isolation conditions. The control room system is designed to automatically start upon control room isolation and to maintain the control room pressure to the design positive pressure so that all leakage should be out leakage.

Radiation monitor R-1 is not part of the Control Room Ventilation System. NRC letter dated January 27, 1982 concluded that, at IP3, "radiation monitors for makeup air are not required." NYPA has also demonstrated (calculation dated May 29, 1992) that Central Control Room (CCR) isolation is not required for maintaining radiation exposure within General Design Criteria 19 limits following a fuel handling accident or gas-decay-tank rupture. For a loss of coolant accident, CCR isolation is initiated by the safety injection signal.

The control room is equipped with two independent toxic gas monitoring systems. One system in the control room consists of a channel for oxygen (with two oxygen detectors) and a channel each for ammonia and chlorine. The second system in the control room ventilation intake consists of one channel each for oxygen, ammonia and chlorine. Oxygen detectors are used to indirectly monitor changes in carbon dioxide levels.

These toxic gas monitoring systems are designed to alarm in the control room upon detection of the short term exposure limit (STEL) value. The operability of the toxic gas monitoring systems provides assurance that the control room operators will have adequate time to take protective action in the event of an accidental toxic gas release. Selection of the gases to be monitored are based on the results described in the Indian Point Unit 3 Habitability Study for the Control Room, dated July, 1981. The alarm setpoints will be in accordance with industrial ventilation standards as defined by the American Conference of Governmental Industrial Hygienists.⁽¹⁶⁾

The OPS has been designed to withstand the effects of the postulated worse case Mass Input (i.e., single safety injection pump) without exceeding the 10 CFR 50, Appendix G curve. Curve III on Figure 3.1.A-3 provides the setpoint curve of the OPS PORVs which is sufficiently below the Appendix G curve such that PORVs overshoots would not exceed the allowable Appendix G pressures. Therefore, only one safety injection pump can be available to feed water into the RCS when the OPS is operable. The other pumps must

TABLE 4.1-1 (Sheet 1 of 6)

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TESTS OF INSTRUMENT CHANNELS				
<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
1. Nuclear Power Range	S	D (1) M (3)*	Q (2)** Q (4)	1) Heat balance calibration 2) Bistable action (permissive, rod stop, trips) 3) Upper and lower chambers for axial offset 4) Signal to ΔT
2. Nuclear Intermediate Range	S (1)	N.A.	P (2)	1) Once/shift when in service 2) Verification of channel response to simulated inputs
3. Nuclear Source Range	S (1)	N.A.	P (2)	1) Once/shift when in service 2) Verification of channel response to simulated inputs
4. Reactor Coolant Temperature	S	18M	Q (1) Q (2)	1) Overtemperature - ΔT 2) Overpower - ΔT
5. Reactor Coolant Flow	S	18M	Q	
6. Pressurizer Water Level	S	18M	Q	
7. Pressurizer Pressure	S	18M	Q	High and Low
8. 6.9 KV Voltage & Frequency	N.A.	18M	Q	Reactor protection circuits only
9. Analog Rod Position	S	24M	M	

TABLE 4.1-1 (Sheet 2 of 6)

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
10. Steam Generator Level	S	18M	Q	
11. Residual Heat Removal Pump Flow	N.A.	18M	N.A.	
12. Boric Acid Tank Level	S	18M	N.A.	Bubbler tube rodded during calibration
13. Refueling Water Storage Tank Level	W	18M	N.A.	Low level alarms
14. Containment Pressure	S	18M	Q	High and High-High
15. Process and Area Radiation Monitoring:				
a. Fuel Storage Building Area Radiation Monitor (R-5)	D	24M	Q	
b. Vapor Containment Process Radiation Monitors (R-11 and R-12)	D	24M	Q	
c. Vapor Containment High Radiation Monitors (R-25 and R-26)	D	18M	Q	
d. Wide Range Plant Vent Gas Process Radiation Monitor (R-27)	D	24M	Q	
e. Main Steam Lines Process Radiation Monitors (R-62A, R-62B, R-62C, and R-62D)	D	24M	Q	
f. Gross Failed Fuel Detectors (R-63A and R-63B)	D	24M	Q	

TABLE 4.1-1 (Sheet 3 of 6)

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
16. Containment Water Level Monitoring System:				
a. Containment Sump	N.A.	18M	N.A.	Narrow Range, Analog
b. Recirculation Sump	N.A.	18M	N.A.	Narrow Range, Analog
c. Containment Water Level	N.A.	18M	N.A.	Wide Range
17. Accumulator Level and Pressure	S***	18M	N.A.	
18. Steam Line Pressure	S	18M	Q	
19. Turbine First Stage Pressure	S	18M	Q	
20. Reactor Protection Relay Logic	N.A.	N.A.	TM	
21. Turbine Trip Low Auto Stop Oil Pressure	N.A.	18M	N.A.	
22. Boron Injection Tank Return Flow	S	18M	N.A.	
23. Temperature Sensor in Auxiliary Boiler Feedwater Pump Building	N.A.	N.A.	18M	
24. Temperature Sensors in Primary Auxiliary Building				
a. Piping Penetration Area	N.A.	N.A.	24M	
b. Mini-Containment Area	N.A.	N.A.	24M	
c. Steam Generator Blowdown Heat Exchanger Room	N.A.	N.A.	24M	

TABLE 4.1-1 (Sheet 4 of 6)

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
25. Level Sensors in Turbine Building	N.A.	N.A.	24M	
26. Volume Control Tank Level	N.A.	18M	N.A.	
27. Boric Acid Makeup Flow Channel	N.A.	18M	N.A.	
28. Auxiliary Feedwater:				
a. Steam Generator Level	S	18M	Q	Low-Low
b. Undervoltage	N.A.	18M	18M	
c. Main Feedwater Pump Trip	N.A.	N.A.	18M	
29. Reactor Coolant System Subcooling Margin Monitor	D	18M	N.A.	
30. PORV Position Indicator	N.A.	N.A.	24M	Limit Switch
31. PORV Position Indicator	D	24M	24M	Acoustic Monitor
32. Safety Valve Position Indicator	D	24M	24M	Acoustic Monitor
33. Auxiliary Feedwater Flow Rate	N.A.	18M	N.A.	
34. Plant Effluent Radioiodine/ Particulate Sampling	N.A.	N.A.	18M	Sample line common with monitor R-13
35. Loss of Power				
a. 480v Bus Undervoltage Relay	N.A.	18M	M	
b. 480v Bus Degraded Voltage Relay	N.A.	18M	M	
c. 480v Safeguards Bus Undervoltage Alarm	N.A.	18M	M	
36. Containment Hydrogen Monitors	D	Q	M	

TABLE 4.1-1 (Sheet 5 of 6)

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
37. Core Exit Thermocouples	D	N.A.	N.A.	
38. Overpressure Protection System (OPS)	D	18M	18M	
39. Reactor Trip Breakers	N.A.	N.A.	TM(1) 18M(2)	1) Independent operation of under-voltage and shunt trip attachments 2) Independent operation of under-voltage and shunt trip from Control Room manual push-button
40. Reactor Trip Bypass Breakers	N.A.	N.A.	(1) 18M(2) 18M(3)	1) Manual shunt trip prior to each use 2) Independent operation of under-voltage and shunt trip from Control Room manual push-button 3) Automatic undervoltage trip
41. Reactor Vessel Level Indication System (RVLIS)	D	18M	N.A.	
42. Ambient Temperature Sensors Within the Containment Building	D	18M	N.A.	
43. River Water Temperature # (installed)	S	18M	N.A.	1) Check against installed instrumentation or another portable device
44. River Water Temperature # (portable)	S (1)	Q (2)	N.A.	2) Calibrate within 30 days prior to use and quarterly thereafter

TABLE 4.1-1 (Sheet 6 of 6)

Table Notation

- * By means of the movable incore detector system
- ** Quarterly when reactor power is below the setpoint and prior to each startup if not done previous month.
- *** If either an accumulator level or pressure instrument channel is declared inoperable, the remaining level or pressure channel must be verified operable by interconnecting and equalizing (pressure and/or level wise) a minimum of two accumulators and crosschecking the instrumentation.
- # These requirements are applicable when specification 3.3.F.5 is in effect only.

- S - Each Shift
- W - Weekly
- P - Prior to each startup if not done previous week
- M - Monthly
- NA - Not Applicable
- Q - Quarterly
- D - Daily
- 18M - At least once per 18 months
- TM - At least every two months on a staggered test basis (i.e., one train per month)
- 24M - At least once per 24 months

TABLE 2.1-1

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION		
INSTRUMENT	MINIMUM CHANNELS OPERABLE*	ACTION
1. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE a. Liquid Radwaste Effluent Line** b. Steam Generator Blowdown Effluent Line	 (1) (1)	 1 2
2. GROSS BETA OR GAMMA RADIOACTIVITY MONITORS PROVIDING ALARM BUT NOT PROVIDING AUTOMATIC TERMINATION OF RELEASE a. Service Water System Effluent Line	 (1)	 3
3. FLOW RATE MEASUREMENT DEVICES a. Liquid Radwaste Effluent Line b. Steam Generator Blowdown Effluent Line	 (1) (1)	 4 4

* During release by the pathway, channels shall be operable and in service during such release on a continuous, uninterrupted basis. Except that outages are permitted, within the time frame and limitations of the specified action, for the purpose of maintenance of required tests, checks and calibration.

** The condensate polisher regenerative waste release path does not need to be monitored unless a primary to secondary side leak is present.

TABLE 3.1-1

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS				
INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
1. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE				
a. Liquid Radwaste Effluent Line (R-18 and R-61****)	D*	D*	24M(3)	Q(1)*
b. Steam Generator Blowdown Effluent Line (R-19)	D*	M*	24M(3)	Q(1)*
2. GROSS BETA OR GAMMA RADIOACTIVITY MONITORS PROVIDING ALARM BUT NOT PROVIDING AUTOMATIC TERMINATION OF RELEASE				
a. Service Water System Effluent Line (R-16A and R-16B)	D*	M*	24M(3)	Q(2)*
b. Service Water System Effluent Line (R-23)	D*	M*	18M(3)	Q(2)*
3. FLOW RATE MEASUREMENT DEVICES				
a. Liquid Radwaste Effluent Line	D(4)	N.A.	18M	Q
b. Steam Generator Blowdown Effluent Line	D(4)	N.A.	24M	N.A.
4. RADIOACTIVITY RECORDERS				
a. Liquid Radwaste Effluent Line	D*	N.A.	24M	Q****
b. Steam Generator Blowdown Effluent Line	D*	N.A.	24M	Q****
5. TANK LEVEL INDICATING DEVICES***				
a. Refueling Water Storage Tank	D**	N.A.	18M	18M
b. Primary Water Storage Tank	D**	N.A.	18M	18M
c. Monitor Tank #31	D**	N.A.	18M	18M
d. Monitor Tank #32	D**	N.A.	18M	18M

TABLE NOTATIONS

* When this pathway is utilized for releases, with frequency no more than indicated.

** During liquid additions to the tank.

TABLE 3.1-1(Continued)

- *** Tanks included in this specification are those outdoor tanks that are not surrounded by liners, dikes, or walls capable of holding the tank contents and do not have tank overflows and surrounding area drains connected to the liquid radwaste treatment system.
- **** Required only if alarm/trip setpoint is based on recorder-controller.
- ***** The condensate polisher regenerative waste release path does not need to be monitored unless a primary to secondary side leak is present.
- (1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occur if the following condition exists:
1. Instrument indicates measured levels above the alarm/trip setpoint.
- (2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
1. Instrument indicates measured levels above the alarm setpoint.
 2. Instrument controls not set in operate mode.
- (3) Radioactive calibration standards used for channel calibrations shall be traceable to the National Bureau of Standards or an aliquot of calibration solution shall be analyzed with instrumentation which is calibrated with NBS traceable standards. (Standards from suppliers who participate in measurement assurance activities with NBS are acceptable).
- (4) CHANNEL CHECK shall consist of verifying indication of flow during periods of release. CHANNEL CHECK shall be made at least once per 24 hours on days on which continuous, periodic, or batch releases are made.

D Daily
M Monthly
N.A. Not Applicable
Q Quarterly
18M At least once per 18 months.
24M At least once per 24 months.

TABLE 3.2-1

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS					
INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	FUNCT- TIONAL TEST	MODES IN WHICH SURVEIL- LANCE REQUIRED
1. WASTE GAS HOLDUP SYSTEM a. Noble Gas Activity Monitor Providing Alarm (R-20)	D	M	24M(2)	Q(1)***	*
2. WASTE GAS HOLDUP SYSTEM EXPLOSIVE GAS MONITORING SYSTEM a. Hydrogen Monitor b. Oxygen Monitor	D D	N.A. N.A.	M(3) M(4)	N.A. N.A.	** **
3. CONDENSER AIR EJECTOR a. Noble Gas Activity Monitor (R-15)	D	M	24M(2)	Q(1)***	*
4. ENVIRONMENTAL RELEASE POINTS (PLANT VENT, ADMIN. BUILDING CONTROLLED AREA. VENT, RAD. MACHINE SHOP VENT) a. Noble Gas Activity Monitor (R-14, R-27, R-46, and R-59) b. Iodine Sampler c. Particulate Sampler d. Flow Rate Monitor e. Sampler Flow Rate Monitor	D W W D D	M N.A. N.A. N.A. N.A.	24M(2) N.A. N.A. 18M 18M	Q(1)*** N.A. N.A. Q N.A.	* * * * *
5. CONTAINMENT PURGE SYSTEM a. Containment Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release (R-12)	D	M	24M(2)	Q(1)***	*

TABLE NOTATIONS

* Surveillance is required at all times except when monitor has been removed from service in accordance with Table 2.2-1.

TABLE 3.2-1(Continued)

- ** During waste gas holdup system operation (treatment for primary system off gases).
- *** Will not include operation of automatic control functions.
- (1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
1. Instrument indicates measured levels above the alarm setpoint.
 2. Instrument controls not set in operate mode.
- (2) Radioactive Calibration Standards used for channel calibrations shall be traceable to the National Bureau of Standards or an aliquot of calibration gas shall be analyzed with instrumentation which is calibrated with NBS traceable standards (standards from suppliers which participate in measurement assurance activities with NBS are acceptable).
- (3) The CHANNEL CALIBRATION shall include the use of standard gas samples containing:
1. Less than or equal to two volume percent hydrogen,
- and
2. Greater than or equal to four volume percent hydrogen,
- (4) The CHANNEL CALIBRATION shall include the use of standard gas samples containing:
1. Less than or equal to one volume percent oxygen,
- and
2. Greater than or equal to four volume percent oxygen.

D	Daily
M	Monthly
N.A.	Not Applicable
Q	Quarterly
18M	At least once per 18 months
24M	At least once per 24 months



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 137 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 January 25, 1993, 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 (Appendix A) and the Radiological Environmental Technical Specification (Appendix B). The requested changes would revise Appendix A and Appendix B to incorporate the following radiation monitoring system changes:

- (1) The frequency of process and area radiation monitor calibration (specified in Appendix A Table 4.1-1 and Appendix B Tables 3.1-1 and 3.2-1) would be changed to accommodate operation on a 24-month cycle.
- (2) The frequency of radioactivity recorder calibration (specified in Appendix B Table 3.1-1) would be changed to accommodate operation on a 24-month cycle.

The requested changes are needed to accommodate operation on a 24-month fuel cycle. The licensee commenced operating on a 24-month fuel cycle, instead of the previous 18-month fuel cycle, with fuel cycle 9. Fuel cycle 9 started in August 1992. The proposed changes follow the guidance provided in Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," as applicable.

In addition, the licensee requested the following administrative changes:

- (1) Appendix A Table 4.1-1 would be changed to identify and specify each radiation monitor by its appropriate tag number and the table would be reformatted for consistency.
- (2) Appendix B Tables 3.1-1 and 3.2-1 would be changed to identify and specify each radiation monitor by its appropriate tag number.
- (3) Appendix B Tables 2.1-1 and 3.1-1 would be changed to clarify monitoring requirements for the condensate polisher waste release path. In addition, Appendix B Table 2.1-1 would be reformatted for consistency.

- (4) Appendix A Table 4.1-1 and Appendix B Table 3.1-1 would be changed to clearly indicate that the surveillance requirement for monitors R-25/26 and R-23 will remain as once per 18 months.
- (5) The Bases for Appendix A Section 3.3 would be changed to clarify the control room ventilation radiation monitoring requirements.

2.0 EVALUATION

The licensee considered the following factors in evaluating the radiation monitoring system surveillance interval extensions from 18 to 24 months:

- Does on-line testing adequately demonstrate operability or are failures only being detected during these refueling tests?
- Did past equipment performance have an effect on system safety functions?
- Does performing the surveillance test at power present a burden?

2.1 Radiation Monitor and Recorder Calibration

The licensee's calibration interval extension request applies to the following process and area radiation monitors:

APPENDIX A TABLE 4.1-1

R-5	Fuel storage building area
R-11	Vapor containment particulate activity process
R-12	Vapor containment gas activity process radiation monitor
R-27	Wide range plant vent gas activity process
R-62A	Main steam line activity process
R-62B	Main steam line activity process
R-62C	Main steam line activity process
R-62D	Main steam line activity process
R-63A	Gross failed fuel detector process
R-63B	Gross failed fuel detector process

APPENDIX B TABLE 3.1-1

R-16A	Fan cooler and motor cooler service water activity process
R-16B	Fan cooler and motor cooler service water activity process
R-18	Waste disposal liquid activity process
R-19	Steam generator blowdown activity process
R-61	Condensate polisher overboard process

APPENDIX B TABLE 3.2-1

R-12	Vapor containment gas activity process
R-14	Plant vent gas activity process
R-15	Condenser air ejector exhaust gas activity process
R-20	Waste disposal gas activity process
R-27	Wide range plant vent gas activity process

- R-46 Administration building particulate activity process
- R-59 Radioactive machine shop effluent gas activity process

The licensee's calibration interval extension request applies to the following radioactivity recorders:

APPENDIX B TABLE 3.1-1

- R-18 Waste disposal liquid activity process
- R-19 Steam generator blowdown activity process
- R-61 Condensate polisher overboard process

The vapor containment high radiation area monitors (R-25 and R-26) and the service water activity process radiation monitor (R-23) did not meet the licensee's criteria for extending the calibration interval to accommodate a 24-month cycle, therefore, these three monitors will retain the 18-month calibration interval.

The licensee has a Process Radiation Monitor Calibration Factor Verification Program which calculates and accounts for instrument drift on-line. This is in addition to the refueling interval instrument calibrations. The monitors covered by this program include: R-11, R-12, R-14, R-15, R-16A, R-16B, R-18, R-19, R-20, R-27, R-46, R-59, R-61, R-63A, and R-63B.

For each of the monitors that are part of this program, a radioactive sample of known isotopic mixture and activity is introduced and a conversion factor can be calculated for each monitor. The licensee stated that this procedure is performed at least annually for each monitor. Any instrument drift that may have occurred since the last refueling surveillance was performed, regardless of the length of the surveillance interval, would be compensated for by an appropriate on-line adjustment. Therefore, the licensee concluded that for monitors that are part of this program, an accurate indication of radioactive releases can be obtained regardless of instrument drift.

The monitors that are not included as part of the Process Radiation Monitor Calibration Factor Verification Program include the fuel storage building area monitor (R-5) and the main steam line activity process monitors (R-62A, R-62B, R-62C, and R-62D). The vendor for both these types of instruments do not specify maximum calibration intervals. The licensee stated that discussions with the vendor (Sorrento) indicate that calibration frequency should be based on plant specific performance and application.

The licensee uses two methods to provide on-line operability assessment of the R-5 monitor. The two methods are a quarterly functional test and the health physics periodic task scheduling procedure. For this procedure, periodic area radiation surveys are performed and compared to the corresponding monitor indication. Large discrepancies between the survey and monitor reading must be evaluated. Even though the R-5 monitor provides automatic isolation of the fuel storage building, the R-5 trip setting was not assumed in the IP3 fuel

handling accident analysis as described in the Final Safety Analysis Report (FSAR). Therefore, any postulated increases in drift will not invalidate FSAR accident analysis assumptions.

On-line operability assessment of the R-62 monitors consists of quarterly functional tests. These radiation monitors are intended to detect major primary to secondary system leakage. The R-62 monitors provide only indication; they do not provide control or automatic actuation functions.

The licensee reviewed data from 1987 to 1992 related radiation monitoring system performance. Of the 97 radiation monitoring system occurrence reports that were written during this time period, only three were a result of a refueling surveillance test. The licensee stated that on-line testing, alarms, and routine operator rounds provide an effective means to identify radiation monitor and recorder operability problems in a timely manner. In addition, the instrument drift of most of the process radiation monitors is compensated for by the Process Radiation Monitor Calibration Factor Verification Program. Based on the results of this review, the licensee concluded that the surveillance test intervals could be extended since the vast majority of refueling test results were satisfactory and there was no evidence that radiation monitoring system performance was a function of the surveillance intervals.

The NRC staff has reviewed the information presented by the licensee regarding radiation monitoring system testing and concludes the requested changes are acceptable.

2.2 Administrative Changes

The licensee proposed a number of administrative changes that would improve clarity. Appendix A Table 4.1-1 currently specifies, in part, the surveillance requirements for "Process and Area Radiation Monitoring Systems" with no further detail included. The proposed change would delineate each of the process and radiation monitoring systems as individual line entries and each individual line entry would include the specific monitor number. For example, one new line entry would be "Fuel Storage Building Radiation Monitor (R-5)." In addition, since each monitor would now be individually listed, Table 4.1-1 would be expanded from 5 to 6 pages.

Similar administrative changes were proposed to Appendix B Tables 3.1-1 and 3.2-1. Specifically, individual line entries would be made where needed and each individual line entry would include the specific monitor number. For the most part, Appendix B Tables 3.1-1 and 3.2-1 currently have individual monitor line entries.

Appendix B Table 2.1-1 Item 1.a requires gross radioactivity monitors that provide alarm and automatic termination of release for the liquid radwaste effluent line. The licensee proposed a footnote to this requirement that would clearly state that the condensate polisher waste release path does not

need to be monitored unless a primary to secondary leak is present. In addition, Appendix B Table 3.2-1, Item 1.a, would be changed to clearly state that the condensate polisher regenerative waste release path does not need to be monitored unless a primary to secondary leak is present since this path is not a radwaste path unless a primary to secondary leak is present. Appendix B Table 2.1-1 would also be reformatted for consistency.

The vapor containment high radiation area monitors (R-25 and R-26) and the service water activity process radiation monitor (R-23) did not meet the licensee's criteria for extending the calibration interval to accommodate a 24-month cycle, therefore, these three monitors will retain the 18-month calibration interval. The licensee proposed changing Appendix A Table 4.1-1 and Appendix B Table 3.1-1, respectively, to indicate that these monitors will retain the 18-month calibration interval.

The NRC staff has reviewed the administrative changes proposed by the licensee and concludes that these changes enhance the quality of the technical specifications. Therefore, the proposed administrative changes are acceptable.

2.3 Bases Change

Radiation monitor R-1 is the central control room (CCR) area radiation monitor. R-1 is designed to automatically switch the CCR ventilation system to the 80% emergency mode (CCR isolation) when a high radiation condition is detected. However, based on a calculation dated May 29, 1992, the licensee has concluded that CCR isolation from R-1 is not required for maintaining CCR radiation exposures within the General Design Criteria 19 (10 CFR Part 50, Appendix A) limits. CCR isolation from R-1 would occur following a fuel handling accident or a gas decay tank rupture. Following a loss-of-coolant accident, CCR isolation is initiated by the safety injection signal. Therefore, the licensee concluded that R-1 is not required for CCR ventilation system operability and proposed clarifying that fact in the Appendix A Section 3.3 Bases. The NRC staff has reviewed the proposed Bases change and offers no objection.

2.4 Summary

The licensee has evaluated the effect of the increase in the surveillance interval on safety for each of the proposed changes and has concluded that the effect is small. The licensee has confirmed that historical plant maintenance and surveillance data do not invalidate this conclusion. The increase in each of the surveillance intervals to accommodate a 24-month fuel cycle does not invalidate any assumption in the IP3 licensing basis.

The staff has reviewed the information presented by the licensee and concludes that the proposed changes do not have a significant effect on safety and they follow the guidance of GL 91-04, as applicable. Therefore, all the proposed changes are acceptable. In addition, the staff has reviewed the proposed Appendix A Bases change and offers no objection.

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 and changes surveillance requirements. 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 (58 FR 16871). 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 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.

Principal Contributor:
Nicola F. Conicella

Date: August 4, 1993

- (4) Appendix A Table 4.1-1 and Appendix B Table 3.1-1 have been changed to clearly indicate that the surveillance requirement for monitors R-25/26 and R-23 will remain as once per 18 months.
- (5) The Bases for Appendix A Section 3.3 has been changed to clarify the control room ventilation radiation monitoring 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,

Original signed by:

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

Enclosures:

- 1. Amendment No. 137 to DPR-64
- 2. Safety Evaluation

cc w/enclosures:
 See next page

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