

Mr. James Knubel
 Chief Nuclear Officer
 Power Authority of the State
 of New York
 123 Main Street
 White Plains, NY 10601

February 7, 2000

Template NRR-058

SUBJECT: ISSUANCE OF AMENDMENT FOR INDIAN POINT NUCLEAR GENERATING
 UNIT NO. 3 RE: RADIOACTIVE EFFLUENT TECHNICAL SPECIFICATIONS (TAC
 NO. MA6225)

Dear Mr. Knubel:

The Commission has issued the enclosed Amendment No. 199 to Facility Operating License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3 (IP3). The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated February 19, 1998, as supplemented by letter dated July 28, 1999. The amendment implements the Radiological Effluent Technical Specifications guidance of Generic Letter 89-01 and makes changes that are necessary to implement the revised 10 CFR Part 20.

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/

George F. Wunder, Project Manager, Section 1
 Project Directorate 1
 Division of Licensing Project Management
 Office of Nuclear Reactor Regulation

Docket No. 50-286

Enclosures: 1. Amendment No.199 to DPR-64
 2. Safety Evaluation
 cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

February 7, 2000

Mr. James Knubel
Chief Nuclear Officer
Power Authority of the State
of New York
123 Main Street
White Plains, NY 10601

SUBJECT: ISSUANCE OF AMENDMENT FOR INDIAN POINT NUCLEAR GENERATING
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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 black ink, appearing to read "George F. Wunder".

George F. Wunder, Project Manager, Section 1
Project Directorate 1
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-286

Enclosures: 1. Amendment No199 to DPR-64
2. Safety Evaluation

cc w/encls: See next page

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Unit No. 3**

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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. 199
License No. DPR-64

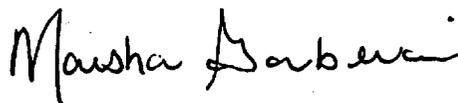
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Power Authority of the State of New York (the licensee) dated February 19, 1998, as supplemented July 28, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as 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 to approve the relocation of certain Technical Specification requirements to licensee-controlled documents, as described in the licensee's application dated February 19, 1998, as supplemented by letter dated July 28, 1999, and reviewed in the staff's safety evaluation dated [redacted]. This license is also amended by page 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. 199, 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. Implementation shall include the relocation of Technical Specification requirements to the appropriate licensee-controlled document as identified in the licensee's application dated February 19, 1998, as supplemented by letter dated July 28, 1999.

FOR THE NUCLEAR REGULATORY COMMISSION



Marsha Gamberoni, Acting Chief, Section 1
Project Directorate 1
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications

Date of Issuance: February 7, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 199

FACILITY OPERATING LICENSE NO. DPR-64

DOCKET NO. 50-286

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

Remove Pages

1-6
1-7
6-13
6-14

6-15
6-16
6-18
6-19
6-20
6-21
6-22
1/2-1
1/2-2
1/2-3
1/2-4
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4-1
4-2
4-3
4-4
4-5
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4-7
4-8
4-9

Insert Pages

1-6
1-7
6-13
6-14
6-14(a)
6-14(b)
6-14(c)
6-15
6-16
6-18
6-19
6-20
6-21
6-22
1/2-1
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1/2-3
1/2-4
1/2-5
1/2-6
3-1
4-1
4-2
4-3
4-4
4-5
4-6

1.16 REPORTABLE EVENT

A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10 CFR 50.

1.17 CORE OPERATING LIMITS REPORT

The CORE OPERATING LIMITS REPORT (COLR) is the unit-specific document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.9.1.6. Plant operation within these operating limits is addressed in individual specifications.

1.18 SHUTDOWN MARGIN

SHUTDOWN MARGIN (SDM) is the instantaneous amount of negative reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all full-length rod cluster assemblies (shutdown and control) are fully inserted except for the single rod cluster assembly of highest reactivity worth which is assumed to be fully withdrawn.

1.19 EFFLUENT CONCENTRATION

The EFFLUENT CONCENTRATION is that concentration of a radionuclide specified in 10 CFR 20, Table 2 of Appendix B.

1.20 MEMBER(S) OF THE PUBLIC

MEMBER OF THE PUBLIC means any individual except when that individual is receiving an OCCUPATIONAL DOSE.

1.21 OCCUPATIONAL DOSE

OCCUPATIONAL DOSE means the dose received by an individual in the course of employment in which the individual's assigned duties involve exposure to radiation or to radioactive material from licensed and unlicensed sources of radiation, whether in the possession of the licensee or other person. OCCUPATIONAL DOSE does not include dose received from background radiation, from any medical administration the individual has received, from exposure administered to individuals administered radioactive material and released in accordance with 35.75, from voluntary participation in medical research programs, or as a MEMBER OF THE PUBLIC.

1.22 OFFSITE DOSE CALCULATION MANUAL (ODCM)

The OFFSITE DOSE CALCULATION MANUAL SHALL contain the current methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring Alarm/Trip Setpoints, and in the conduct of the Radiological Environmental Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs required by Appendix A Technical Specification 6.8.4 and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Radioactive Effluent Release Reports required by Appendix B Technical Specifications 4.3.2.1 and 4.3.2.2.

1.23 PROCESS CONTROL PROGRAM (PCP)

The PROCESS CONTROL PROGRAM shall contain the current formulas, sampling, analyses, tests, and determinations to be made to ensure that the processing and packaging of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way to assure compliance with 10 CFR Parts 20, 61 and 71, and Federal and State regulations and other requirements governing the disposal of solid radioactive waste.

1.24 SITE BOUNDARY

The SITE BOUNDARY (see Figure 1-1) means that line beyond which the land or property is not owned, leased, or otherwise controlled by either site licensee.

1.25 UNRESTRICTED AREA

An UNRESTRICTED AREA (see Figure 1-1) means an area, access to which is neither limited, nor controlled by either site licensee, but the UNRESTRICTED AREA does not include areas over water bodies. The concept of UNRESTRICTED AREAS, established at or beyond the SITE BOUNDARY, is utilized in the radioactive effluent controls to keep levels of radioactive materials in liquid and gaseous effluents as low as is reasonably achievable, pursuant to 10 CFR 50.36a.

- b. Each REPORTABLE EVENT shall be reviewed by the PORC and a report submitted by the Site Executive Officer to the Chief Nuclear Officer, Director Regulatory Affairs and Special Projects, and the Chairman of the SRC.

6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

- a. The reactor shall be shut down and reactor operation shall only be resumed in accordance with the provisions of 10 CFR 50.36(c)(1)(i).
- b. The Safety Limit Violation shall be reported immediately to the Commission. The Chief Nuclear Officer, Director Regulatory Affairs and Special Projects, and the Chairman of the SRC will be notified within 24 hours.
- c. A Safety Limit Violation Report shall be prepared by the PORC. This report shall describe (1) applicable circumstances preceding the occurrences, (2) effects of the occurrence upon facility components, systems or structures, and (3) corrective action taken to prevent recurrence.
- d. The Safety Limit Violation Report shall be submitted to the Commission, the Chief Nuclear Officer, the Director Regulatory Affairs and Special Projects, and the Chairman of the SRC by the Site Executive Officer.

6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented and maintained covering the activities referenced below:

- a. The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, November, 1972.
- b. Refueling operations.
- c. Surveillance and test activities of safety related equipment.
- d. Security Plan implementation.
- e. Emergency Plan implementation.
- f. Process Control Program implementation.
- g. Offsite Dose Calculation Manual implementation.

- h. Post-accident sampling and analysis and maintenance of required equipment.
- i. Collection and analysis or measurement of post-accident radioactive iodine and particulates in plant gaseous effluents and maintenance of required equipment.
- j. Fire Protection Program Plan implementation.
- k. Radioactive Effluent Control Program implementation.
- l. Radiological Environmental Monitoring Program implementation.

6.8.2 Each procedure of 6.8.1 above, and changes thereto, shall be approved prior to implementation by the appropriate responsible member(s) of management, as specified in Technical Specification 6.5.0. They shall also be reviewed periodically as set forth in administrative procedures.

6.8.3 Temporary changes to procedures above may be made provided:

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant staff, at least one of whom holds a Senior Reactor Operator's License.
- c. The change is documented, and reviewed and approved by the appropriate member(s) of plant management, as specified by Technical Specification 6.5.0 within 14 days of implementation.

6.8.4 The following programs shall be established, implemented, and maintained:

a. Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonable achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by site procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- 1. Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM.
- 2. Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 times the concentration values in Appendix B, Table 2, Column 2 to 10 CFR 20.

3. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents pursuant to 10 CFR 20.1302 (except as discussed in 6.8.4.a.2) and with the methodology and parameters in the ODCM.
4. Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50.
5. Determinations of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days.
6. Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31 day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50.
7. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the SITE BOUNDARY shall be limited to the following:
 - a. For noble gases: Less than or equal to a dose rate of 500 mrems/yr to the total body and less than or equal to a dose rate of 3000 mrems/yr to the skin, and
 - b. For iodine-131, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to dose rate of 1500 mrems/yr to any organ.
8. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50.
9. Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from iodine-131, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50.
10. Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

b. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of the environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

1. Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM.
2. A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census.
3. Participation in an Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

c. Process Control Program

A program shall be provided to ensure that the processing and packaging of solid radioactive wastes shall be accomplished in compliance with 10 CFR Parts 20, 61 and 71, and Federal and State regulations and other requirements governing the disposal of solid radioactive waste. The program requirements shall be contained in the PCP manual.

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

- 6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Regional Administrator - Region 1, unless otherwise noted.

STARTUP REPORT

- 6.9.1.1 A summary report of appropriate plant testing shall be submitted following (1), an amendment to the license involving a planned increase in power level, (2) installation of fuel that has a different design and (3) modifications that may have significantly altered the nuclear, thermal, or hydraulic performances of the plant. The report shall address each of the tests identified in the FSAR and shall in general include a description of the measured values of the operating conditions or characteristics obtained during the testing and comparison of these values with acceptance criteria. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

- 6.9.1.2 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup program, and resumption or commencement of commercial power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

ANNUAL RADIATION EXPOSURE REPORTS

- 6.9.1.3 A tabulation on an annual basis of the number of station, utility and other personnel (including contractors), for whom monitoring was required, receiving exposures greater than 100 mrem/yr and their associated man-rem exposures according to work and job functions, 1/ e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance, waste processing, and refueling. The dose assignment to various duty functions may be estimates based on pocket dosimeter, TLD, or film badge measurements. Small exposures totalling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole body dose received from external sources shall be assigned to specific major work functions.

MONTHLY OPERATING REPORT

- 6.9.1.4 Routine reports of operating statistics and shutdown experience, including documentation of all challenges to the PORVs or safety valves, shall be submitted on a monthly basis to the Director, Office of Resource Management, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the Regional Administrator - Region 1, no later than the 15th of each month following the calendar month covered by the report.

ANNUAL REPORTS

- 6.9.1.5 A report of specific activity analysis results in which the primary coolant exceeded the limits of Specification 3.1.D. The following information shall be included: (1) Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded; (2) Results of the last isotopic analysis for radioiodine performed prior to exceeding the limit, results of analysis while activity was reduced to less than limit. Each result should include date and time of sampling and the radioiodine concentrations; (3) Clean-up system flow history starting 48 hours prior to the first sample in which the limit was exceeded; (4) Data providing the I-131 concentration and one other radioiodine isotope concentration in microcuries per gram as a function of time for the duration of the specific activity above the steady-state level; and (5) The time duration when the specific activity of the primary coolant exceeded the radioiodine limit.

1/ This tabulation supplements the requirements of 20.2206 of 10 CFR Part 20
6-15

6.9.1.6 CORE OPERATING LIMITS REPORT

6.9.1.6.a Core operating limits shall be established and documented in the CORE OPERATING LIMITS REPORT before each reload cycle or any remaining part of a reload cycle for the following:

1. Axial Flux Difference limits for Specification 3.10.2.
2. Heat Flux Hot Channel Factor and K(Z) for Specification 3.10.2.
3. Nuclear Enthalpy Rise Hot Channel Factor and Power Factor Multiplier for Specification 3.10.2.
4. Shutdown Bank Insertion Limit for Specification 3.10.4.
5. Control Bank Insertion Limits for Specification 3.10.4.

6.9.1.6.b The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by NRC in:

1. WCAP-9272-P-A, "WESTINGHOUSE RELOAD SAFETY EVALUATION METHODOLOGY," July 1985 (W Proprietary).
(Methodology for Specification 3.10.4 - Shutdown Bank Insertion Limit, Control Bank Insertion Limits and 3.10.2 - Nuclear Enthalpy Rise Hot Channel Factor.)
- 2a. WCAP-8385, "POWER DISTRIBUTION CONTROL AND LOAD FOLLOWING PROCEDURES - TOPICAL REPORT," September 1974 (W Proprietary).
(Methodology for Specification 3.10.2 - Axial Flux Difference (Constant Axial Offset Control).)

3f. WCAP-12610, "VANTAGE+ Fuel Assembly Report," (W Proprietary).
(Methodology for Specification 3.10.2 - Heat Flux Hot Channel Factor).

6.9.1.6.c The core operating limits shall be determined so that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety limits are met.

6.9.1.6.d The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided upon issuance, for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator-Region 1 within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification;

- a. Sealed source leakage on excess of limits (Specification 3.9)
- b. Inoperable Seismic Monitoring Instrumentation (Specification 4.10)
- c. Seismic event analysis (Specification 4.10)
- d. Inoperable plant vent sampling, main steam line radiation monitoring or effluent monitoring capability (Table 3.5-4, items 5, 6 and 7)
- e. The complete results of the steam generator tube inservice inspection (Specification 4.9.C)
- f. Deleted.
- g. Release of radioactive effluents in excess of limits (Technical Specification 6.8.4.a)

- h. Inoperable containment high-range radiation monitors (Table 3.5-5, Item 24)
- i. Radioactive environmental sampling results in excess of reporting levels (Technical Specification 6.8.4.b)
- j. Operation of Overpressure Protection System (Specification 3.1.A.8.c)
- k. Operation of Toxic Gas Monitoring Systems (Specification 3.3.H.3.)
- l. Inoperable explosive gas monitoring instrumentation (Appendix B, Technical Specification 1.1.1)

6.10 RECORD RETENTION

6.10.1 The following records shall be retained for at least five years:

- a. Records and logs of facility operation covering time interval at each power level.
- b. Records and logs of principal maintenance activities, inspection, repair and replacements of principal items of equipment related to nuclear safety.
- c. ALL REPORTABLE EVENTS submitted to the Commission.
- d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.
- e. Records of changes made to Operating Procedures.
- f. Records of radioactive shipments.
- g. Records of sealed source and fission detector leak tests and results.
- h. Records of annual physical inventory of all source material of record.
- i. Records of reactor tests and experiments.

6.10.2 The following records shall be retained for the duration of the Facility Operating License:

- a. Records of any drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.

- b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
- c. Records of facility radiation and contamination surveys.
- d. Records of radiation exposure as required by 10 CFR 20.
- e. Records of gaseous and liquid radioactive material released to the environs.
- f. Records of transient or operational cycles for those facility components designed for a limited number of transient cycles.
- g. Records of training and qualifications for current members of the plant staff.
- h. Records of in-service inspections performed pursuant to these Technical Specifications.
- i. Records of Quality Assurance activities required by the QA manual.
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- k. Records of meetings of the PORC and the SRC.
- l. Records for Environmental Qualification which are covered under the provisions of paragraph 6.13.
- m. Records of secondary water sampling and water quality.
- n. Records of analyses required by the radiological environmental monitoring program that would permit evaluation of the accuracy of the analysis at a later date. This should include procedures effective at specified times and records showing that these procedures were followed.
- o. Records of service lives of all safety-related hydraulic snubbers including the date at which the service life commences and associated installation and maintenance records.
- p. Records of reviews performed for changes made to the OFFSITE DOSE CALCULATION MANUAL and the PROCESS CONTROL PROGRAM.

6.11 RADIATION AND RESPIRATORY PROTECTION PROGRAM

6.11.1 Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure so as to maintain exposures as far below the limits specified in 10 CFR 20 as reasonably achievable. Pursuant to 10 CFR 20.1703, allowance may be made for the use of respiratory protection equipment in conjunction with activities authorized by the operating license for this plant in determining whether individuals in restricted areas are exposed to concentrations in excess of the limits specified in Appendix B, Table 1, Column 3 of 10 CFR 20.

6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.1601 of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr** but less than 1000 mrem/hr** shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP)*. Any individual or group of individuals permitted to enter such areas shall be provided or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.
- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physicist in the Radiation Work Permit.

* Health Physics Personnel shall be exempt from the RWP issuance requirements for entries into high radiation areas during the performances of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

** Measured at 30 centimeters (12 inches) from the source of radioactivity.

6.12.2* In addition to the requirements of 6.12.1 above, areas accessible to individuals with radiation levels such that an individual could receive in 1 hour a dose greater than 1000 mrem**, shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or the plant Radiological and Environmental Services Manager or his designee.

6.13 ENVIRONMENTAL QUALIFICATION

6.13.1 Environmental qualification of electric equipment important to safety shall be in accordance with the provisions of 10 CFR 50.49. Pursuant to 10 CFR 50.49, Section 50.49 (d), the EQ Master List identifies electrical equipment requiring environmental qualification.

6.13.2 Complete and auditable records which describe the environmental qualification method used, for all electrical equipment identified in the EQ Master List, in sufficient detail to document the degree of compliance with the appropriate requirements of 10 CFR 50.49 shall be available and maintained at a central location. Such records shall be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified.

6.14 CONTAINMENT LEAKAGE RATE TESTING PROGRAM

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak Test Program, Dated September 1995" as modified by the following exception:

a. ANS 56.8 - 1994, Section 3.3.1: WCCPPS isolation valves are not Type C tested.

The peak calculated primary containment internal pressure, P_s , is 42.40 psig. The minimum test pressure is 42.42 psig.

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

Leakage acceptance criteria are:

a. Containment leakage rate acceptance criterion is $\leq 1.0 L_s$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60 L_s$ for the Type B and C tests and $\leq 0.75 L_s$ for Type A tests;

b. Air lock acceptance criteria are:

1) Overall the air lock leakage rate is $\leq 0.05 L_s$ when tested at $\geq P_s$,

2) For each door, leakage rate is $\leq 0.01 L_s$ when pressurized to $\geq P_s$.

c. Isolation valves sealed with the service water system leakage rate into containment acceptance criterion is ≤ 0.36 gpm per fan cooler unit

* Health Physics Personnel shall be exempt from the RWP issuance requirements for entries into high radiation areas during the performances of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

** Measured at 30 centimeters (12 inches) from radiation sources external to the body, or 30 centimeters (12 inches) from any surface that the radiation penetrates.

1/2.0 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

1/2.1 MONITORING INSTRUMENTATION

1.1.1 EXPLOSIVE GAS MONITORING INSTRUMENTATION

LCO:

The explosive gas monitoring instrumentation channels shown in Table 1.1.1-1 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Appendix B Technical Specification 1.3.1 are not exceeded.

APPLICABILITY: As shown in Table 1.1.1-1.

ACTION:

- A. With an explosive gas monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, declare the channel inoperable and take the ACTION shown in Table 1.1.1-1.
- B. With less than the minimum number of explosive gas monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 1.1.1-1. Exert best efforts to return the instruments to OPERABLE status within 30 days and, if unsuccessful, prepare and submit to the Commission, pursuant to Appendix B Technical Specification 4.3.1, a Special Report to explain why the inoperability was not corrected within this time frame.

2.1.1 SURVEILLANCE REQUIREMENTS

The explosive gas monitoring instrumentation channels shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 2.1.1-1.

TABLE 1.1.1-1

EXPLOSIVE GAS MONITORING INSTRUMENTATION			
INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABILITY	ACTION
1. WASTE GAS HOLDUP SYSTEM EXPLOSIVE GAS MONITORING SYSTEM			
a. Hydrogen Monitor	(1)	*	1
b. Oxygen Monitor	(1)	*	1

TABLE NOTATION

* During waste gas holdup system operation (treatment for primary system offgases).

ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, operation of this system may continue provided grab samples of waste tank on reuse or receipt are taken and analyzed daily. With both channels inoperable operation may continue provided grab samples of waste tank on reuse or receipt are taken and analyzed as follows:

- a) Every 4 hours during degassing operations,
- b) Daily during other operations.

TABLE 2.1.1-1

EXPLOSIVE GAS MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS			
INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	MODES IN WHICH SURVEILLANCE REQUIRED
1. WASTE GAS HOLDUP SYSTEM EXPLOSIVE GAS MONITORING SYSTEM			
a. Hydrogen Monitor	D	M(1)	*
b. Oxygen Monitor	D	M(2)	*

TABLE NOTATION

* During waste gas holdup system operation (treatment for primary system off gases).

(1) 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,

(2) 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

1/2.2 RADIOACTIVE LIQUID EFFLUENTS

1.2.1 RADIOACTIVE LIQUID EFFLUENT HOLDUP TANKS*

LCO:

The quantity of radioactive material contained in each of the following unprotected outdoor tanks shall be limited to less than or equal to 10 curies, excluding tritium and dissolved or entrained noble gases.

- a. Refueling Water Storage Tank**
- b. Primary Water Storage Tank
- c. 31 Monitor Tank
- d. 32 Monitor Tank
- e. Outside Temporary Tank***

APPLICABILITY: At all times.

ACTION:

With the quantity of radioactive material in any of the above listed tanks exceeding the above limit, immediately suspend all additions of radioactive material to the tank. Within 48 hours reduce the tank contents to within the limit, and describe the events leading to this condition in the next Annual Radioactive Effluent Release Report.

2.2.1 SURVEILLANCE REQUIREMENTS

The quantity of radioactive material contained in each of the listed tanks shall be determined to be less than or equal to 10 curies excluding tritium and dissolved or entrained noble gases, by analyzing a representative sample of the tank's contents at least once per month when radioactive materials are being added to the tank.

* 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 that do not have tank overflows and surrounding area drains connected to the liquid radwaste treatment system.

** After refueling operations, liquid from the reactor cavity will be sampled for radioactive material content prior to being pumped into the tank.

*** Liquid will be sampled for radioactive content prior to being pumped into the tank.

1/2.3 RADIOACTIVE GASEOUS EFFLUENTS

1.3.1 EXPLOSIVE GAS MIXTURE (Hydrogen rich systems not designed to withstand a hydrogen explosion)

LCO:

The concentration of oxygen in the waste gas holdup system shall be limited to less than or equal to 2% by volume whenever the hydrogen concentration exceeds 4% by volume.

APPLICABILITY: At all times.

ACTION:

- A. With the concentration of oxygen in the waste gas holdup system greater than 2% by volume but less than or equal to 4% by volume, reduce the oxygen concentration to the above limits within 48 hours.
- B. With the concentration of oxygen in the waste gas holdup system greater than 4% by volume and the hydrogen concentration greater than 2% by volume, immediately suspend all additions of waste gases to this portion of the system and reduce the concentration of oxygen to less than or equal to 2% by volume.

2.3.1 SURVEILLANCE REQUIREMENTS

The concentrations of hydrogen and oxygen in the waste gas holdup system shall be determined to be within the above limits by monitoring the waste gases in the waste gas holdup system with the hydrogen and oxygen monitors required OPERABLE by Appendix B Technical Specification Table 1.1.1-1.

1.3.2 GAS STORAGE TANKS

LCO:

The quantity of radioactivity contained in each gas storage tank shall be limited to less than or equal to 50,000 curies noble gases (considered as Xe-133).

APPLICABILITY: At all times.

ACTION:

With the quantity of radioactive material in any gas storage tank exceeding the above limit, immediately suspend all additions of radioactive material to the tank. Within 48 hours reduce the tank contents to within the limit, and describe the events leading to this condition in the next Annual Radioactive Effluent Release Report.

2.3.2 SURVEILLANCE REQUIREMENTS

The quantity of radioactive material contained in each gas storage tank shall be determined to be within the limit at least once per 24 hours when radioactive materials are being added to the tank in accordance with the methodology and parameters in the ODCM.

3.0 BASES

EXPLOSIVE GAS MONITORING INSTRUMENTATION (1/2.1.1)

The explosive gas monitoring instrumentation is provided to monitor and control the concentrations of potentially explosive gas mixtures in the waste gas holdup system. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60 of Appendix A to 10 CFR Part 50.

LIQUID HOLDUP TANKS (1/2.2.1)

The tanks listed in this Specification include all those outdoor tanks that are not surrounded by liners, dikes, or walls capable of holding the tank contents and that do not have tank overflows and surrounding area drains connected to the liquid radwaste treatment system.

Restricting the quantity of radioactive material contained in the specified tanks provides assurance that in the event of an uncontrolled release of the tanks' contents, the resulting concentrations would be less than the values given in Appendix B, Table 2, Column 2 to 10 CFR 20, at the nearest potable water supply and the nearest surface water supply in an UNRESTRICTED AREA.

EXPLOSIVE GAS MIXTURE (1/2.3.1)

This specification is provided to ensure that the concentration of potentially explosive gas mixtures contained in the waste gas holdup system is maintained below the flammability limits of hydrogen and oxygen. Maintaining the concentration of hydrogen and oxygen below their flammability limits provides assurance that the releases of radioactive materials will be controlled in conformance with the requirements of General Design Criterion 60 of Appendix A to 10 CFR Part 50.

GAS STORAGE TANKS (1/2.3.2)

The tanks included in this specification are those tanks for which the quantity of radioactivity contained is not limited directly or indirectly by another Technical Specification to a quantity that is less than the quantity that provides assurance that in the event of an uncontrolled release of the tank's contents, the resulting total body exposure to a MEMBER OF THE PUBLIC at the nearest SITE BOUNDARY will not exceed 0.5 rem in an event of 2 hours duration.

Restricting the quantity of radioactivity contained in each gas storage tank provides assurance that in the event of an uncontrolled release of the tank's contents, the resulting total body exposure to a MEMBER OF THE PUBLIC at the nearest SITE BOUNDARY will not exceed 0.5 rem. This is consistent with NUREG-0133.

4.0 ADMINISTRATIVE CONTROLS

4.1 RESPONSIBILITIES

The responsibilities of the Plant Operating Review Committee and the Safety Review Committee associated with the implementation of the Radiological Environmental Technical Specifications are delineated in the appropriate sections of Appendix A Technical Specification 6.5.

4.2 PROCEDURES AND PROGRAMS

Reference to implementation of the procedures and programs necessary for the implementation of the Radiological Environmental Technical Specifications are delineated in Appendix A Technical Specifications 6.8.1 and 6.8.4.

4.3 REPORTING REQUIREMENTS

4.3.1 SPECIAL REPORTS

The activities requiring the submittal of special reports are delineated in Appendix A Technical Specification 6.9.2. The ODCM also provides a listing of special reporting requirements.

4.3.2 ROUTINE REPORTS

4.3.2.1 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT *

The Annual Radioactive Effluent Release Report covering the operation of the unit during the previous year of operation shall be submitted prior to May 1 of each year.

The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be (1) consistent with the objectives outlined in the ODCM and PCP and (2) in conformance with 10 CFR 50.36a and Section IV.B.1 of Appendix I to 10 CFR Part 50.

A full listing of the information to be contained in the Annual Radioactive Effluent Release Report is provided in the ODCM.

* A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

4.3.2.2 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT*

An Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted prior to May 1 of each year.

The Annual Radiological Environmental Operating Reports shall include summaries, interpretations, and an analysis of trends of the results of the Radiological Environmental Monitoring Program for the report period. The material provided shall be consistent with the objectives outlined in (1) the ODCM and (2) Sections IV.B.2, IV.B.3, and IV.C of Appendix I to 10 CFR Part 50.

A full listing of the information to be contained in the Annual Radiological Environmental Operating Report is provided in the ODCM.

4.3.3 MAJOR CHANGES TO RADIOACTIVE LIQUID, GASEOUS AND SOLID WASTE TREATMENT SYSTEMS**

Licensee initiated major changes to the radioactive waste systems (liquid, gaseous and solid) shall be reported to the Commission in the Annual Radioactive Effluent Release Report for the period in which the evaluation was reviewed by the PORC. The discussion of each shall contain:

- a. A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR Part 50.59.
- b. Sufficient detailed information to totally support the reason for the change without benefit of additional or supplemental information;
- c. A detailed description of the equipment, components and processes involved and the interfaces with other plant systems;

* A single submittal may be made for a multiple unit station.

** The information called for in this Specification will be submitted as part of the annual FSAR update.

- d. An evaluation of the change, which shows the predicted releases of radioactive materials in liquid and gaseous effluents and/or quantity of solid waste that differ from those previously predicted in the license application and amendments thereto;
- e. An evaluation of the change, which shows the expected maximum exposures to an individual in the UNRESTRICTED AREA and to the general population that differ from those previously estimated in the license application and amendments thereto;
- f. A comparison of the predicted releases of radioactive materials, in liquid and gaseous effluents and in solid waste, to the actual releases for the period prior to when the changes are to be made;
- g. An estimate of the exposure to plant operating personnel as a result of the change; and
- h. Documentation of the fact that the change was reviewed and found acceptable by the PORC.

4.4 RECORD RETENTION

Records associated with the Radiological Environmental Monitoring Program are to be retained as required by Appendix A Technical Specification 6.10.2.

4.5 PROCESS CONTROL PROGRAM (PCP)

4.5.1 The PCP shall be approved by the Commission prior to implementation.

4.5.2 Licensee initiated changes to the PCP:

1. Shall be documented and records of reviews performed shall be retained as required by Appendix A Technical Specification 6.10.2.p. This documentation shall contain:

- a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s); and

- b. A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.
2. Shall become effective upon review and acceptance by the PORC and the approval of the Site Executive Officer.
3. Shall be submitted to the Commission as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the PCP was made. Each change shall be identified by marking in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

4.6 OFFSITE DOSE CALCULATION MANUAL (ODCM)

4.6.1 The ODCM shall be approved by the Commission prior to implementation.

4.6.2 Licensee initiated changes to the ODCM:

1. Shall be documented and records of reviews performed shall be retained as required by Appendix A Technical Specification 6.10.2.p. This documentation shall contain:
 - a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the changes(s); and
 - b. A determination that the change will maintain the level of radioactive effluent control required pursuant to 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent dose or setpoint calculations;
2. Shall become effective upon review and acceptance by the PORC and the approval of the Site Executive Officer.

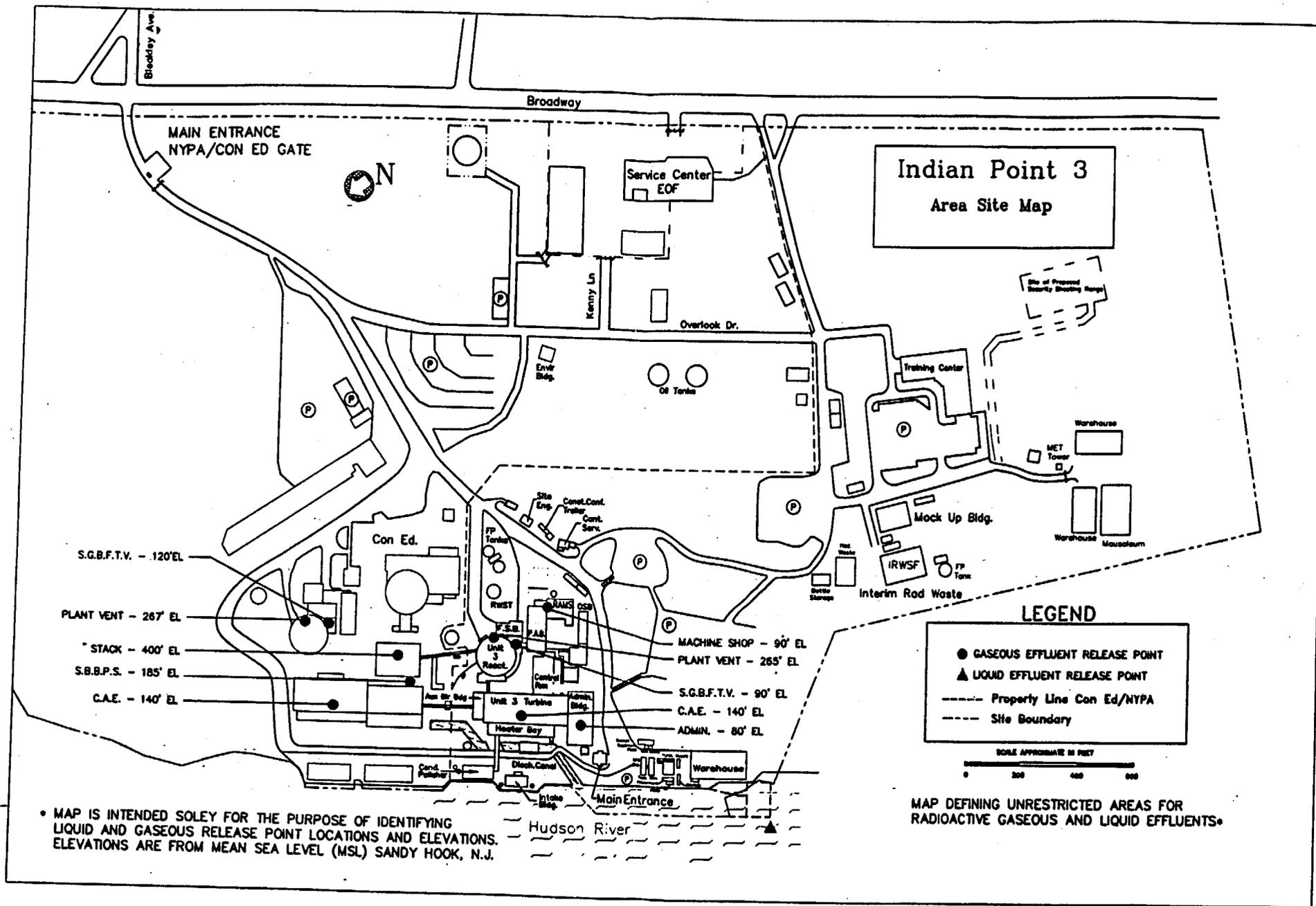
3. Shall be submitted to the Commission as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by marking in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

4.7

MAP DEFINING UNRESTRICTED AREAS FOR RADIOACTIVE GASEOUS AND LIQUID EFFLUENTS

Information regarding radioactive gaseous and liquid effluents, which will allow identification of structures and release points as well as definition of UNRESTRICTED AREAS within the SITE BOUNDARY that are accessible to MEMBERS OF THE PUBLIC, shall be shown in Figure 4.7-1.

The definition of UNRESTRICTED AREA used in implementing the Radiological Effluent Technical Specifications has been expanded over that in 10 CFR 20.1003. The UNRESTRICTED AREA does not include areas over water bodies. For calculations performed pursuant to 10 CFR Part 50.36a, the concept of UNRESTRICTED AREAS, established at or beyond the SITE BOUNDARY, is utilized in the Radiological Effluent Controls to keep levels of radioactive materials in liquid and gaseous effluents as low as is reasonably achievable.





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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 199 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 February 19, 1998, as supplemented July 28, 1999, the Power Authority of the State of New York (the licensee) submitted a request for changes to the Indian Point Unit 3 (IP3) Technical Specifications (TSs). The proposed amendment would implement Generic Letter 89-01, "Implementation of Programmatic Controls for Radiological Effluent Technical Specifications in the Administrative Controls Section of the Technical Specifications and the Relocation of Procedural Details of RETS to the Offsite Dose Calculation Manual or to the Process Control Program" (GL-89-01) by (1) relocating the procedural details involving radioactive effluent monitoring instrumentation, control of liquid and gaseous effluents, equipment requirements for liquid and gaseous effluents, and radiological environmental monitoring from the Radiological Environmental Technical Specifications (RETS contained in Part II of Appendix B to the operating license) to the appropriate section(s) of Appendix A, the Offsite Dose Calculation Manual (ODCM), or the Process Control Program (PCP) manual; (2) simplifying the reporting requirements specified in the Administrative Controls section of Part II of Appendix B, and relocating the details to the ODCM; (3) incorporating programmatic controls in the Administrative Controls section of Appendix A; (4) revising the administrative controls involving changes to the ODCM and PCP, including the addition of record retention requirements; and (5) updating and relocating the definitions of the ODCM and PCP. The proposed amendment also includes changes to implement the revised 10 CFR Part 20, editorial changes to the frequency of the Radioactive Effluent Release Report in accordance with 10 CFR 50.36a, and a change to allow an annual, as opposed to semiannual, submittal for the Radioactive Effluent Release Report in response to Presidential memoranda on reducing regulatory burden.

2.0 BACKGROUND

Section 182a of the Atomic Energy Act of 1954, as amended (the Act), requires TSs to be made part of any license issued to operate production or utilization facilities. Section 50.36 of Title 10 of the Code of Federal Regulations (10 CFR), "Technical Specifications," implements Section 182a of the Act and delineates requirements for determining the contents of TSs. Section 50.36 requires that the TSs include items in specific categories, including (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements; (4) design features; and (5) administrative

controls. Section 50.36 does not, however, specify the particular requirements to be included in a plant's TSs.

The U.S. Nuclear Regulatory Commission (NRC or Commission) has provided guidance for the contents of TSs in its "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" ("Final Policy Statement") (58 FR 39132), in which the Commission indicated that compliance with the Final Policy Statement satisfies Section 182a of the Act. In particular, the Commission indicated that certain items could be relocated from the TSs to licensee-controlled documents, consistent with the standard enunciated in *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-531, 9 NRC 263, 273 (1979). In that case, the Atomic Safety and Licensing Appeal Board indicated that "[T]echnical specifications are to be reserved for those matters as to which the imposition of rigid conditions or limitations upon reactor operation is deemed necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety."

Consistent with this approach, the Final Policy Statement identified four criteria to be used in determining whether particular items are required to be included in the TSs, as follows:

- (1) installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary;
- (2) a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
- (3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a Design Basis Accident or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
- (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

The four criteria listed above were subsequently incorporated into the regulations by an amendment to 10 CFR 50.36 (60 FR 36959). The Commission's Final Policy Statement and documentation related to the revision of 10 CFR 50.36 acknowledged that implementation of these criteria may result in the relocation of existing TS requirements to licensee-controlled documents and programs.

As discussed in GL 89-01, the NRC staff examined the contents of the RETS in relation to the then existing Commission's Interim Policy Statement on Technical Specification Improvements. The staff determined that programmatic controls could be implemented in the Administrative Controls section of the TSs to satisfy regulatory requirements for the RETS. Additionally, the staff determined that the procedural details of the current TSs on radioactive effluents and radiological environmental monitoring could be relocated to the ODCM. Likewise, the procedural details of the current TSs on solid radioactive wastes could be relocated to the PCP. These actions simplify the RETS, meet regulatory requirements for radioactive effluents and

radiological environmental monitoring, and are provided as a line-item improvement, consistent with the goals of the Policy Statement.

3.0 EVALUATION

The licensee proposed to revise the RETS in accordance with GL-89-01, to update references to 10 CFR Part 20, and to make changes to the Radiological Effluent Release Report in accordance with 10 CFR 50.36a.

3.1 RETS

The licensee proposed the following changes to implement GL-89-01:

The definitions GASEOUS RADWASTE TREATMENT SYSTEM, PURGE - PURGING, SOURCE CHECK and VENTILATION EXHAUST TREATMENT SYSTEM are being relocated to the ODCM.

The definitions OFFSITE DOSE CALCULATION MANUAL and PROCESS CONTROL PROGRAM are being updated and relocated to the ODCM;

The definition SOLIDIFICATION is being relocated to the PCP;

The radioactive liquid effluent monitoring instrumentation limiting conditions for operation (LCO) and surveillance requirements (Part II of Appendix B, Technical Specifications 2.1 and 3.1, respectively) and the corresponding basis will be relocated to the ODCM;

The radioactive gaseous effluent monitoring instrumentation LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.2 and 3.2, respectively) and the corresponding basis will be relocated to the ODCM;

The explosive gas monitoring instrumentation LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.2 and 3.2, respectively) and the corresponding basis will remain in Part II of Appendix B but will be renumbered;

The liquid effluent concentration LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.3.1 and 3.3.1, respectively) and the corresponding basis will be relocated to the ODCM;

The dose from liquid effluents LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.3.2 and 3.3.2, respectively), and the corresponding basis will be relocated to the ODCM;

The liquid radwaste, treatment system LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.3.3 and 3.3.3, respectively), and the corresponding basis will be relocated to the ODCM;

The liquid holdup tanks LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.3.4 and 3.3.4, respectively) and the corresponding basis will remain in Part II of Appendix B but will be renumbered;

The gaseous effluent dose rates LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.4.1 and 3.4.1, respectively) and the corresponding basis section will be relocated to the ODCM;

The dose from noble gases LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.4.2 and 3.4.2, respectively) and the corresponding basis will be relocated to the ODCM;

The dose from iodine-131, tritium, and radionuclides in particulate form LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.4.3 and 3.4.3, respectively) and the corresponding basis will be relocated to the ODCM;

The gaseous radwaste treatment system LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.4.4 and 3.4.4, respectively) and the corresponding basis will be relocated to the ODCM;

The explosive gas mixture LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.4.5 and 3.4.5, respectively) and the corresponding basis will remain in Part II of Appendix B but will be renumbered;

The gas storage tanks LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.4.6 and 3.4.6, respectively) and the corresponding basis will remain in Part II of Appendix B but will be renumbered;

The solid radioactive waste LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.5 and 3.5, respectively) and the corresponding basis will be relocated to the PCP;

The total dose LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.6 and 3.6, respectively) and the corresponding basis will be relocated to the ODCM;

The radiological environmental monitoring program LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.7 and 3.7, respectively) and the corresponding basis will be relocated to the ODCM;

The land use census LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.8 and 3.8, respectively) and the corresponding basis will be relocated to the ODCM;

The interlaboratory comparison program LCO and surveillance requirements (Part II of Appendix B, Technical Specifications 2.9 and 3.9, respectively) and the corresponding basis will be relocated to the ODCM;

Part II of Appendix B, Technical Specifications 5.1, 5.2, and 5.3.1 entitled Responsibilities, Procedures and Programs, and Special Reports, respectively, will remain in Part II of Appendix B but will be renumbered;

Part II of Appendix B, Technical Specification 5.3.2, Routine Reports, will be simplified and the details regarding the contents of the Radioactive Effluent Release Reports and the Radiological Operating Reports will be relocated to the ODCM;

Part II of Appendix B, Technical Specification 5.4, Record Retention, will remain in Part II of Appendix B but will be renumbered;

Part II of Appendix B, Technical Specification 5.5, Process Control Program, will remain in Part II of Appendix B but will be renumbered;

Part II of Appendix B, Technical Specification 5.6, Offsite Dose Calculation Manual, will remain in Part II of Appendix B but will be renumbered;

Part II of Appendix B, Technical Specification 5.7, Major changes to Radioactive Liquid, Gaseous and Solid Waste Treatment Systems, will remain in Part II of Appendix B but will be renumbered;

Part II of Appendix B, Technical Specification 5.8, Map Defining Unrestricted Areas for Radioactive Gaseous and Liquid Effluents, will remain in Part II of Appendix B but will be renumbered;

Appendix A, Technical Specification 6.8 is being revised to include procedural and control requirements for the Radioactive Effluent Control and the Radiological Environmental Monitoring Programs;

Appendix A, Technical Specification 6.9.2 is being revised to reference the new administrative controls outlined in Appendix A, Technical Specification 6.8.4, and to add special reporting requirements for inoperable explosive gas monitoring instrumentation;

Appendix A, Technical Specification 6.10.2 is being revised to include retention requirements of reviews performed for ODCM and PCP changes.

The licensee has confirmed that the changes implementing the RETS have either been prepared in accordance with the guidance of GL 89-01 and NUREG-1301, "Offsite Dose Calculation Manual: Guidance: Standard Radiological Effluent Controls for Pressurized Water Reactors," or are editorial changes such as renumbering, reformatting, or wording changes that do not change the intent of the TS.

The staff has reviewed the licensee's submittal and has determined that the proposed changes to implement the RETS are consistent with the guidance in GL-89-01. Because the control of radioactive effluents continues to be governed by operating procedures that must satisfy the regulatory requirements of 10 CFR Part 20, 40 CFR Part 190, 10 CFR 50.36a and Appendix I to 10 CFR Part 50, the staff has determined that the procedural details are not required to be included in the TS. The staff also finds that the licensee's proposed editorial changes do not

constitute material changes to the TS. The proposed changes implementing GL-89-01 are, therefore, acceptable.

3.2 Implementation of Revised 10 CFR Part 20

The implementation of the revised 10 CFR Part 20 includes updating definitions, revising high radiation area controls, and updating references to 10 CFR 20.1 through 20.602 with the corresponding references to 20.1001 through 20.2402. The following TS changes implement the revised 10 CFR Part 20:

The definition MAXIMUM PERMISSIBLE CONCENTRATION (MPC) is being replaced with the definition EFFLUENT CONCENTRATION.

The definitions MEMBER(S) OF THE PUBLIC, SITE BOUNDARY and UNRESTRICTED AREA are being updated.

The definition PROCESS CONTROL PROGRAM is being updated to reference the applicable Part 20 sections.

New Appendix A Technical Specification 6.8.4.a.7 cites specific values from the revised Part 20 Appendix B Tables.

Appendix A, Technical Specification 6.9.1.3 is being updated to reference the applicable 10 CFR Part 20 sections.

Appendix A, Technical Specification 6.10.2.d is being updated to be consistent with 10 CFR Part 20.

Appendix A, Technical Specifications 6.12.1 and 6.12.2 are being updated to be consistent with 10 CFR Part 20.

Part II of Appendix B, Technical Specifications 2.3.1, and 2.6 are being updated to reference the applicable 10 CFR Part 20 sections.

Part II of Appendix B, Technical Specification Bases for Radioactive Liquid Effluent Monitoring Instrumentation, Gaseous Effluent Monitoring Instrumentation, and Liquid Effluents Concentration are being revised in order to accommodate needed operational flexibility to facilitate implementation of the revised 10 CFR Part 20 requirements and to update references to Part 20 sections.

Part II of Appendix B, Technical Specification Bases for Liquid Holdup Tanks are being updated to reference the applicable Part 20 sections.

Part II of Appendix B, Technical Specification Bases for Total Dose are being updated to reference the applicable Part 20 sections.

Part II of Appendix B, Technical Specification Bases for Gaseous Effluent Dose Rate are being extensively revised in order to accommodate needed operational flexibility to facilitate implementation of the revised 10 CFR Part 20 requirements.

Part II of Appendix B, Technical Specification 5.8 and Figure 5.1-1 are being updated to reflect revised definitions and to reference the applicable Part 20 sections.

Definitions for all terms appearing in UPPERCASE in either Appendix A or Part II of Appendix B will be located in the Appendix A Definition section. Specifically, definitions OFFSITE DOSE CALCULATION MANUAL, PROCESS CONTROL PROGRAM, EFFLUENT CONCENTRATION, MEMBER(S) OF THE PUBLIC, SITE BOUNDARY, and UNRESTRICTED AREAS are being added to Appendix A.

The definitions ACTION, CHANNEL CALIBRATION, CHANNEL CHECK, CHANNEL FUNCTIONAL TEST, LIQUID RADWASTE TREATMENT SYSTEM, OPERABLE, OPERABILITY, RATED THERMAL POWER, and THERMAL POWER are being added to the ODCM (rather than being relocated from Part II of Appendix B as with the other definitions).

The definition VENTING is being deleted from the Technical Specifications.

Procedural controls for the PCP are being added to Appendix A, Technical Specification 6.8.

The detailed routine reporting requirements currently contained in Part II of Appendix B and being relocated to the ODCM are being reformatted.

A new Special Reports section is being added to the ODCM.

Other editorial changes are being made, including the reformatting and renumbering of Technical Specifications to remain in Part II of Appendix B.

The Table of Contents, List of Tables, List of Figures are being revised to reflect all of the proposed changes.

The staff has reviewed the licensee's proposed changes and finds that they are consistent with guidance on implementing the revised 10 CFR Part 20 and are therefore acceptable with two exceptions. The changes to Part II of Appendix B, Technical Specification Bases for Radioactive Liquid Effluent Monitoring Instrumentation, Gaseous Effluent Monitoring Instrumentation, and Liquid Effluents Concentration, and the changes to Part II of Appendix B, Technical Specification Bases for Gaseous Effluent Dose Rate, are beyond the scope of administrative changes to implement the revised 10 CFR Part 20 and are evaluated in Sections 3.2.1 and 3.2.2 below.

3.2.1 Changes to Allow 10X Liquid Effluent

The proposed change to the liquid concentration release limit is being made in order to accommodate needed operational flexibility to facilitate implementation of the new 10 CFR Part 20 requirements.

The basic requirements for TS concerning effluents from nuclear power reactors are stated in 10 CFR 50.36a. These requirements indicate that compliance with effluent TS will keep average annual releases of radioactive material in effluents to small percentages of the limits specified in the old 10 CFR 20.106 (new 10 CFR 20.1302). These requirements further indicate that operational flexibility is allowed, compatible with considerations of health and safety, which may temporarily result in releases higher than such small percentages, but still within the limits specified in the old 10 CFR 20.106 which references Appendix B, Table II maximum permissible concentrations (MPCs). These referenced concentrations are specific values which relate to an annual dose of 500 mrem. It is further indicated in 10 CFR 50.36a that when using operational flexibility, best efforts shall be exerted to keep levels of radioactive materials as low as reasonably achievable (ALARA) as set forth in 10 CFR Part 50, Appendix I.

As stated in the Introduction to Appendix B of the new 10 CFR Part 20, the liquid effluent concentrations (EC) limits given in Appendix B, Table 2, Column 2, are based on an annual dose of 50 mrem. Since a release concentration corresponding to a limiting dose rate of 500 mrem/year has been acceptable as a TS limit for liquid effluents, which applies at all times as an assurance that the limits of 10 CFR Part 50, Appendix I are not likely to be exceeded, it should not be necessary to reduce this limit by a factor of 10.

Operational history at IP3 has demonstrated that the use of concentration values associated with the old 10 CFR 20.106 as TS limits have resulted in calculated maximum individual doses to a member of the public that are small percentages of the limits of 10 CFR Part 50, Appendix I. Therefore, the use of concentration values which correspond to an annual dose of 500 mrem (ten times the concentration values stated in the new 10 CFR Part 20, Appendix B, Table 2, Column 2) should not have a negative impact on the ability to continue to operate within the limits of 10 CFR Part 50, Appendix I and 40 CFR 190. The staff has concluded, therefore, that the use of concentration values which correspond to an annual dose of 500 mrem is acceptable.

3.2.2 Changes to Gaseous Effluent TS

To accommodate operational flexibility needed for effluent releases, the limits associated with the liquid concentration release rate TS are based on ten times the concentrations stated in the new 10 CFR 20, Appendix B, Table 2, Column 2, to apply at all times. The multiplier of 10 is proposed because the annual dose of 500 mrem, on which the concentrations in the old 10 CFR Part 20, Appendix B, Table II, Column 2 are based, is a factor of 10 higher than the annual dose of 50 mrem, that the concentrations in the new 10 CFR Part 20, Appendix B, Table 2, Column 2, are based.

Compliance with the limits of the new 10 CFR 20.1301 will be demonstrated by operating within the limits of 10 CFR Part 50, Appendix I, and 40 CFR Part 190.

The proposed change to the gaseous release rate limit is being made in order to accommodate operational flexibility to facilitate implementation of the new 10 CFR Part 20 requirements. The gaseous EC limits given in Appendix B, Table 2, Column 1, are based on an annual dose of 50 mrem for isotopes for which inhalation or ingestion is limiting, or 100 mrem for isotopes for which submersion (noble gases) is limiting. Release concentrations corresponding to limiting dose rates at the site boundary from noble gases less than or equal to 500 mrem/yr to the whole body and 3000 mrem/yr to the skin; and 1500 mrem/yr to any organ from Iodine-131,

tritium and all radionuclides in particulate form with half lives greater than eight days have been acceptable as TS limits for gaseous effluents to assure that limits of 10 CFR 50, Appendix I, and 40 CFR 190 are not likely to be exceeded. It should not be necessary to restrict operational flexibility by incorporating the dose rate limit associated with EC value for isotopes based on inhalation/ingestion (50 mrem/yr) or the dose rate associated with EC value for isotopes based on submersion (100 mrem/yr).

Having sufficient operational flexibility is also important in establishing a basis for effluent monitor set point calculations. As discussed above, the concentrations stated in the new 10 CFR 20, Appendix B, Table 2, Column 1, relate to a dose of 50 or 100 mrem in a year. When applied on an instantaneous basis, this corresponds to a dose rate of 50 or 100 mrem/year. The concentrations associated with these low values are impractical upon which to base effluent monitor set point calculations for many gaseous release situations when monitor background, monitor sensitivity, and monitor performance must be taken into account. Tritium and all radionuclides in particulate form with half lives greater than 8 days have been acceptable as TS limits for gaseous effluents to assure that limits of 10 CFR Part 50, Appendix I, and 40 CFR 190 are not likely to be exceeded. It should not be necessary to restrict operational flexibility by incorporating the dose rate limit associated with EC value for isotopes based on inhalation/ingestion (50 mrem/yr) or the dose rate associated with EC value for isotopes based on submersion (100 mrem/yr).

Having sufficient operational flexibility is also important in establishing a basis for effluent monitor setpoint calculations. As discussed above, the concentrations stated in the new 10 CFR Part 20, Appendix B, Table 2, Column 1, relate to a dose of 50 or 100 mrem in a year. When applied on an instantaneous basis, this corresponds to a dose rate of 50 or 100 mrem/year. The concentrations associated with these low values are impractical upon which to base effluent monitor set point calculations for many gaseous release situations when monitor background, monitor sensitivity, and monitor performance must be taken into account.

To accommodate operational flexibility needed for effluent releases, the limit associated with gaseous release rate TS will be maintained at the current instantaneous dose rate limit for noble gases of 500 mrem/yr to the whole body and 3000 mrem/yr to the skin, and for Iodine-131, for tritium, and for all radionuclides in particulate form with half lives greater than 8 days, an instantaneous dose rate limit of 1500 mrem/yr to any organ.

Compliance with the limits of the new 10 CFR 20.1301 will be demonstrated by operating within the limits of 10 CFR Part 50, Appendix I, and 40 CFR Part 190. Operational history at IP3 has demonstrated that the use of the dose rate values listed above (i.e., 500, 3000, and 1500 mrem/yr) as TS limits have resulted in calculated maximum individual doses to a member of the public that are small percentages of the limits of 10 CFR Part 50, Appendix I. The staff has determined, therefore, that this change is acceptable.

3.3 Summary

Based on the above evaluation, the staff finds that the proposed TS amendment is consistent, except as discussed above, with the guidance provided in GL 89-01. All deviations from the guidance in GL 89-01 were found to be acceptable. Since the control of radioactive effluents and radiological environmental monitoring continue to be limited in accordance with operating procedures that must satisfy the requirements of 10 CFR 20.106, 40 CFR Part 190, 10 CFR

50.36a, and Appendix I to 10 CFR Part 50, the staff concludes that these changes are administrative in nature and that there is no adverse impact on plant safety as a consequence. The staff also finds that there will be no adverse impact from increasing the interval at which the Radioactive Effluents Release Report must be submitted from semiannually to annually. Accordingly, the NRC staff finds that the proposed changes are 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

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact have been prepared and published in the Federal Register on January 7, 2000 (65 FR 1183). Accordingly, based upon the environmental assessment, the staff has determined that the issuance of this amendment will not have a significant effect on the quality of the human environment.

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.

Principal Contributor: G. Wunder

Date: February 7, 2000

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AMENDMENT NO. 199 TO FACILITY OPERATING LICENSE NO. DPR-64-INDIAN POINT
UNIT 3

~~File Center~~

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