

TECHNICAL SPECIFICATIONS

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Appendix A to
Provisional Operating License DPR-5
For the
Entergy Nuclear Indian Point 2, LLC
and Entergy Nuclear Operations, Inc.

1.0 GENERAL INFORMATION

The facility, known as the Indian Point Station Unit No. 1, is located on a site in the Village of Buchanan, Westchester County, New York. The Indian Point Station Unit No. 2 and the Indian Point Station Unit No. 3 share this site.

Indian Point Unit No. 1 includes a pressurized water reactor, which operated with an authorized maximum steady state power level of 615 thermal megawatts until October 31, 1974. Pursuant to the June 19, 1980 "Commission Order Revoking Authority to Operate Facility" and the "Decommissioning Plan for Indian Point Unit No. 1" approved by the NRC in an Order dated January 31, 1996, the reactor remains in a defueled status and the unit continues to operate as a support facility for overall Indian Point Units 1 and 2 operations. Unit No. 1 and Unit No. 2 are physically contiguous and share a number of systems and facilities as well as a common operating organization. The technical specifications contained herein recognize this commonality as well as the intended use of the Unit No. 1 facilities to support Unit No. 2 until retirement of that unit, and contain specific references to Appendix A to the Indian Point Unit No. 2 Facility Operating License No. DPR-26. Unit No. 1 contains radioactive waste processing facilities, which provide waste processing services for both Unit No. 1 and Unit No. 2. Radiological effluent limits are met on an overall site basis and specific operating limits and surveillance requirements for effluent monitoring instrumentation, including stack noble gas monitoring, are discussed in the Offsite Dose Calculation Manual.

1.1 Definitions

1.1.1 Final Safety Analysis Report

The Final Safety Analysis Report (FSAR) for Indian Point Unit No. 1, shall be deemed to refer to, as appropriate, the "Final Hazards Summary Report for the Consolidated Edison Indian Point Reactor Core B" and the following exhibits, which are a part of the original license application for IP1:

- Docket 50-3 Exhibit K-5 (Rev. 1), "Hazards Summary Report Consolidated Edison Thorium Reactor." (January, 1960) Figures 1-2, 1-3, 3-14 only.
- Docket 50-3 Exhibit K-5A11, "Supplementary Information on Plant Design of Consolidated Edison Nuclear Steam Generating Station," (August 1960) Section 3.7.1, pages 171 through 176 only and Section 3.7.2.

1.1.2 Operable-Operability

A system, subsystem, train, component or device shall be operable or have operability when it is capable of performing its intended safety function(s). Implicit in this definition shall be the assumption that necessary instrumentation, controls, electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its safety function(s) are also capable of performing their related support functions.

1.1.3 Offsite Dose Calculation Manual (ODCM)

The Offsite Dose Calculation Manual contains the current methodology and parameters used in the calculation of offsite doses due to radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm/trip setpoints, and in the conduct of the environmental radiological monitoring program. Requirements for the ODCM are specified in Appendix A to the Indian Point Nuclear Generating Unit No. 2 Facility Operating License No. DPR-26.

1.1.4 Site Boundary

The Site Boundary is that line beyond which the land is neither owned, leased, nor otherwise controlled by either ENIP2, ENO, or other site licensee.

1.1.5 Unrestricted Area

An Unrestricted Area is any area at or beyond the Site Boundary, access to which is not controlled by either ENIP2, ENO, or other site licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

1.2 Exclusion Distance

1.2.1 The minimum distance from the reactor facility to the nearest land boundary of the exclusion area, as defined in 10CFR100 shall be 1400 feet.

1.2.2 The minimum distance from the reactor center line to the boundary of the site exclusion area and the outer boundary of the low population zone as defined in 10CFR100.3 is 460 meters and 1100 meters, respectively.

1.3 Principal Activities

The principal activities carried on within the Exclusion Area shall be the generation, transmission and distribution of steam and electrical energy (except by gas-fired power plant); associated service activities; activities relating to the controlled conversion of the atomic energy of fuel to heat energy by the process of nuclear fission; and the storage, utilization and production of special nuclear, source and byproduct materials. Transmission and distribution of natural gas shall be through the use of facilities located as described in the application as amended.

2.0 REACTOR FACILITY DESIGN PERFORMANCE REQUIREMENTS

2.1 Electrical Power Supply

Power for electrical equipment shall normally be supplied by at least two independent transmission feeders from the Consolidated Edison system. If power is lost to the spent fuel storage area radiation monitor, a portable monitor will be promptly set up in the spent fuel storage area.

2.2 Fuel Storage

2.2.1 No fuel other than irradiated fuel from Indian Point Unit No. 1 shall be stored in the Unit No. 1 spent fuel storage area. No fresh fuel shall be stored at Unit No. 1.

2.2.2 Spent fuel storage shall be provided in the storage pools in the Fuel Handling Building. The Fuel Handling Building and the spent fuel storage pool will contain the spent fuel until such time as offsite spent fuel management facilities are provided for, and the spent fuel is transferred to the Department of Energy, or as authorized by 10 CFR Part 72.

2.2.3 Spent fuel storage shall be provided with racks that shall limit the effective multiplication factor to less than 0.75.

2.2.4 Radiation levels in the spent fuel storage area shall be monitored continuously with a high level alarm indication in a location manned by a licensed operator* whenever there is irradiated fuel stored therein. If the monitor is inoperable, a portable monitor may be used. In such cases, provisions shall be made for prompt notification of a licensed operator upon actuation of the portable monitor's high level alarm.

2.2.5 If a spent fuel pool contains spent fuel, the spent fuel cask shall not be moved over that pool or within a distance of that pool such that the cask could strike the pool if it fell or tipped.

2.2.6 A dead-load test shall be successfully performed on the fuel handling building crane before fuel movement begins. The load assumed by the crane for this test must be equal to or greater than the maximum load to be assumed by the crane during the fuel handling operation. A thorough visual inspection of the crane shall be made after the dead-load test and prior to fuel handling.

* Licensed Operator for IP-2

2.3 Fire Protection

Overall site fire protection is provided by a fire protection system, which is common to both Unit No. 1 and Unit No. 2. Operation, maintenance and testing are controlled by common procedures.

3.0 ADMINISTRATIVE AND PROCEDURAL SAFEGUARDS

3.1 Responsibility

Responsibilities are as specified in Appendix A to the Indian Point Nuclear Generating Unit No. 2 Facility Operating License No. DPR-26.

3.2 Organization

The organization requirements are as specified in Appendix A to the Indian Point Nuclear Generating Unit No. 2 Facility Operating License No. DPR-26.

- a. All fuel handling shall be under the direct supervision of a licensed operator.*
- b. The Shift Manager is responsible for operations at the Unit No. 1 facility.

* Licensed operator for IP-2

3.3 Operating Instructions and Procedures

- 3.3.1 No fuel will be loaded into the reactor core or moved into the reactor containment building without prior review and authorization by the Nuclear Regulatory Commission.**
- 3.3.2 Detailed written instruction setting forth procedures used in connection with the operation and maintenance of the nuclear power plant shall conform to the requirements specified in Appendix A to the Indian Point Nuclear Generating Unit No. 2 Facility Operating License No. DPR-26.**
- 3.3.3 Operation and maintenance of equipment related to safety when there is no fuel in the reactor shall be in accordance with written instructions.**

4.0 OPERATING LIMITATIONS

4.1 General

Whenever any operation is being performed that could result in the release of radioactivity or create a change in radiation levels, supporting facilities shall be maintained and operated as required in these Technical Specifications.

4.2 Release of Radioactive Liquids and Gases

The concentration of radioactive materials released in liquid or gaseous form to unrestricted areas shall not exceed the limits specified in 10 CFR Part 20. Release of radioactive liquids and gases shall also be consistent with the requirements of 10 CFR Part 50, Appendix I, as specified in the ODCM.

4.3 Radioactive Waste

All radioactive waste material shall be handled in accordance with 10 CFR Part 20. In addition, solid radioactive waste shall be controlled as specified in the Process Control Program.

4.4 Radiation Monitoring

Radiation monitoring systems shall be maintained operable for: (1) sphere foundation sump, (2) secondary purification blowdown cooling water, and (3) area radiation monitors. If monitoring systems are not operable, effluent sampling and/or local monitoring shall be accomplished to replace the non-operating system. In addition, Unit 1 radioactive effluent monitoring instrumentation shall be operable as specified in the ODCM.

4.5 Radiological Environmental Monitoring

The Indian Point site Radiological Environmental Monitoring Program shall be conducted as specified in the ODCM.

4.6 Spent Fuel Storage and Handling

- 4.6.1 All irradiated fuel shall be stored in the racks provided in the Fuel Handling Building Storage pools, with sufficient shielding that ensures that the radiation level on the operating deck is ≤ 15 mr/hr. Should the radiation level be found to be above 15 mr/hr, corrective action shall be initiated to restore the level to ≤ 15 mr/hr.**

4.6.2 Whenever, spent fuel storage pool water inventory is provided for personnel shielding, the normal water level shall be maintained at or above elevation 48 feet (approximately 6 feet above the top of the spent fuel racks). Any pool in which spent fuel is stored shall be subject to weekly verification of water level. Should the water level be found to be below elevation 48 foot, both pool level and radiation level on the operating deck shall be verified daily. Should the water level be found to be below elevation 47 foot, corrective action shall be initiated to investigate the reason for the reduced level and restore the level to ≥ 48 foot.

4.6.3 Water chemistry in any spent fuel storage pool containing spent fuel shall be maintained within the following limits:

Chlorides:	≤ 1.5 ppm
pH:	4.0 - 8.0
Conductivity	≤ 20 μ s/cm

Should any of the above parameters be found to deviate from the specified limits an effort shall be promptly initiated to investigate the cause of the deviation and a process to restore the parameter to within the applicable limit shall be established in a timely fashion.

4.6.4 Ventilation capable of directing all Fuel Handling Building airborne effluents through monitoring pathways shall be available during any fuel movement or other activity that might potentially damage spent fuel assemblies.

5.0 MAINTENANCE

5.1 General

Components addressed in these technical specification requirements, which have been repaired, replaced, or otherwise subjected to temporary or permanent modification, shall be tested in accordance with procedures, which are appropriate in view of the nature of the repair, replacement, or modification, and the condition of the system.

5.2 Testing

5.2.1 Functional radiation monitoring systems (only for the following: sphere foundation sump and secondary purification blowdown cooling water) and area radiation monitoring systems shall be:

- (a) qualitatively checked daily to verify acceptable operability of instrument channel behavior during operation, and**
- (b) tested quarterly by injection of a simulated signal into the instrument channel to verify that it is operable, including alarm and/or trip initiating action. The quarterly interval is defined as quarterly plus or minus 25% of the quarter.**

5.2.2 Unit 1 radioactive effluent monitoring instrumentation shall satisfy the surveillance requirements as specified in the ODCM.

5.3 Spent Fuel Storage Pool Sampling

Any spent fuel storage pool containing spent fuel stored in water shall be sampled monthly for chloride level, pH and Cesium 137 activity. If Cesium 137 activity is found to be elevated above normal levels, an effort shall be promptly initiated to investigate the cause of the elevated level and take subsequent corrective action, as appropriate.

6.0 PLANT REPORTING REQUIREMENTS

Reporting Requirements are as specified in Appendix A to the Indian Point Nuclear
Generating Unit No. 2 Facility Operating License No. DPR-26.