SEP 2 5 1968

Docket No. 50-286

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Mr. Robert Garvey Executive Secretary Advisory Council on Historic Preservation National Park Service Washington, D. C. 20240

Dear Mr. Garvey:

Consolidated Edison Company of New York, Inc., has filed an application for a construction permit and facility license to authorize construction and operation of a third pressurized water nuclear reactor, Indian Point Unit No. 3, at its Indian Point site in Westchester County, New York. As part of our review of this application, I am forwarding site information and other material filed by the Company.

Indian Point Unit No. 1 has been in operation since August 2, 1962, and construction of Unit No. 2 at the Indian Point site was authorized on October 14, 1966.

The proposed site for the Indian Point Unit No. 3 is adjacent to Units 1 and 2 on the east bank of the Hudson River. The Stony Point Battlefield Reservation, north of Stony Point on U.S. 9W and U.S. 202, is located across the Hudson River from the Indian Point site on the northwest shore of the River and is listed in the <u>National Register of</u> <u>Historic Places</u> published by the Park Service in July 1968.

We would appreciate receiving any comments the Advisory Council may have concerning the location of Unit No. 3 in relation to Stony Point Battlefield Reservation as soon as possible.

Sincerely,

7 signed) Narold L. Price

Harold L. Price Director of Regulation

Enclosures:

- 1. Site & Environmental Info.
- 2. Aerial Photograph
- 3. Info. on Location



1.0 SITE AND ENVIRONMENT,

1.1 SUMMARY OF CONCLUSIONS

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This volume of the PSAR sets forth the site and environmental data which together form a basis for the criteria for designing the facility and for evaluating the routine and accidental release of radioactive liquids and gases to the environment. These data support the conclusion that there will be no undue risk to public health and safety with the plant designed as planned and the environmental characteristics described in this volume. The strength of this conclusion rests not only upon the data themselves but upon the favorable opinions (also included in this volume) of several independent consultants to the Applicant, each speaking within his particular area of expertness, -- health physics, demography, geology, seismology, hydrology or meteorology, as the case may be.

The task of evaluating the environmental characteristics of the area has been facilitated by the significant fact that for ten years studies and measurements of these characteristics have been made, whereas for over four years measurements have been made of the effects on environment of releases from an operating nuclear power facility, the facility the subject of AEC License No. DPR-5.

Careful projections have been made of the probable growth of population in the area and these projections have been taken into account in plant design both as to control of accidents and as to assumptions about operation.

Only forty-six people reside within 1/2 mile of Unit No. 3 and only 1080 live within one mile. Approximately 53,000 people now reside within a 5-mile radius of the proposed facility. The largest concentration of population is in the City of Peekskill (Population 19,000; estimated 1980 population, 30,000) the center of which is about 2-1/2 miles northeast of the site. The most densely populated 15 degree sector, within 5 miles, is toward Peekskill to the northeast and contains 12,120 people.

The 1960 population within a 15-mile radius of the site was 326,930 whereas the 1980 estimated population is 670,210. The projections do not indicate, and there is no reason otherwise to conclude, that the land usage within this radius will shift appreciably during the intervening period. (The land is now zoned

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principally for residential and state park usage although there is some industrial activity and a little agricultural and grazing activity.)

The outer boundary of the low population zone (inhabited by about 66 people) has been set at 1,100 meters from Unit No. 3.

Geologically, the site consists of a hard limestone in a jointed condition which will provide a solid bed for the plant foundation. The bedrock is sufficiently sound to support any loads which could be anticipated up to 50 tons per square foot, which is far in excess of any load which may be imposed by the plant. Although it is hard, the jointed limestone formation is permeable to water. Thus, if water from the plant should enter the ground (an improbable event since the plant is designed to preclude any leakage into the ground) it would percolate to the river rather than enter any ground water supply. Additional studies by Consolidated Edison's geology consultant, Thomas W. Fluhr, and examination of recent soil borings confirms the above conclusions.

In the Hudson River, about 80,000,000 gallons of water flow past the plant each minute during the peak tidal flow. This flow will provide additional mixing and dilution for liquid discharges from the facility. In fact, however, this aspect is superfluous since the assumption in the plant design is to treat the river water as if it were used for drinking (which it is not) and thus to reduce radioactive discharges, by dilution with ordinary plant effluent, to concentrations that would be tolerable for drinking water. There is no danger of flooding at the site.

Seismic activity in the Indian Point area is rare and no damage has resulted therefrom. As stated by Applicant's consultant on seismology, the site is "practically non-seismic" and is "as safe as any area at present known." Notwithstanding such assurance, the plant is designed to withstand an earthquake of the highest intensity ever recorded in this area.

Meteorological conditions in the area of the site were determined during a two-year test program. These data have been used in evaluating the effects of gaseous discharges from the plant during normal operations and during the postulated loss-of-coolant accident. In addition, data supplied by the U.S. Weather Bureau at the Bear Mountain Station, regarding the meteorological conditions during periods of precipitation, have been used to evaluate the rainout of fission gases into surface water reservoirs following the postulated loss-ofcoolant accident. The evaluations indicate that the site meteorology provides adequate diffusion and dilution of any released gases.

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Environmental radioactivity has been measured at the site and surrounding area for the past nine years in association with the operation of Indian Point Unit No. 1, and the construction of the Indian Point Unit No. 2. These measurements will be continued and reported. The radiation measurements of fallout, water samples, vegetation, marine life, etc. have shown no perceptible postoperative increase in activity. Noticeable increases in fallout have coincided with weapons testing programs and appear to be related almost entirely to those programs. The New York State Department of Health recently concluded an independent two-year post-operative study⁽¹⁾ and found that environmental radioactivity in the vicinity of the site is no higher than anywhere else in the State of New York.

Consultants participating in the preparation of the various reports, measurements and conclusions appearing in this volume include Dr. Merril Eisenbud, Director of Environmental Radiation Laboratory, Institute of Industrial Medicine, New York University; Dr. Benjamin Davidson, Meteorologist and Director, Geophysical Science Laboratory, New York University College of Engineering; Dr. Edgar M. Hoover, Regional Economic Development Institute, Inc.: Metcalf & Eddy Engineers, hydrology specialists; Rev. J. J. Lynch, S. J., Director of the Seismic Observatory, Fordham University; Mr. Sidney Paige, Consulting Geologist; Quirk, Lawler and Matusky Engineers, Environmental Science and Engineering Consultants; Mr. Karl R. Kennison, Consulting Civil and Hydraulic Engineer; and Mr. Thomas W. Fluhr, P. E., Consulting Engineering Geologist.

Consolidated Edison Indian Point Reactor Environmental and Post Operation Survey - July, 1966, Division of Environmental Health Services, New York State Department of Health, Hollis S. Ingraham, M.D., Commissioner.

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^{(1) &}lt;u>Consolidated Edison Indian Point Reactor Post Operational Survey - August,</u> <u>1965</u>, Division of Environmental Health Services, New York State Department of Health, Hollis S. Ingraham, M.D., Commissioner.

1.2 LOCATION

1.2.1 GENERAL

Indian Point Unit No. 3 will be built adjacent to and south of Unit No. 1 on a site of approximately 250 acres of land on the east bank of the Hudson River at Indian Point, Village of Buchanan in upper Westchester County, New York. Indian Point Unit No. 2 is being constructed adjacent to and north of Unit No. 1. The site is about 24 miles north of the New York City boundary line. The nearest city is Peekskill, 2.5 miles northeast of Indian Point, with a population of about 19,000. An aerial photograph, Figure 1.2-1, shows the site and about 58 square miles of the surrounding area.

1.2.2 ACCESS

The site is accessible by several roads in the Village of Buchanan. A paved road links the eastern boundary of the site to the existing plant. The existing wharf will be used to receive heavy equipment during the construction period. The site is not served by rail.

1.2.3 SITE OWNERSHIP AND CONTROL

The Consolidated Edison Company is the sole owner of the entire property. The Algonquin Gas Transmission Co. has a right-of-way running east to west through the property, 3500 feet long and 65 feet wide. The proposed reactor is 700 feet north of the Algonquin 26-inch gas main. A permanent easement for the Village of Buchanan sewer crosses the eastern corner of the property. It is 20 feet wide, 900 feet long and 2900 feet east of Unit No. 3. Units No. 1, No. 2 and No. 3 will be fenced by an eight-foot chain link type fence surmounted by three-strand barbed wire. The gates to this restricted area will be either secured or attended by plant personnel. In addition, a fence of the same type will separate the conventional and nuclear parts of the units, isolating the control area. The site is fenced in part with agricultural type fencing and the access road is continuously controlled by Company guards. A scale plot plan of the site is shown on Figure 1.2-2.

1.2.4 ACTIVITIES ON THE SITE

The principal activities on the site will be the generation, transmission and distribution of steam and electrical energy; 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 by-product materials. Possible future activities include the addition of other nuclear and conventional electrical generating units.

An observation building is located about 800 feet southeast of Unit No. 3, and is open to the public during the day and attended by Company personnel. Limited public recreational grounds under Company control will also be provided on the site in the future.