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BEFORE THE UNITED STATES

ATOMIC ENERGY COMMISSION

In the Matter of	)	
	)	
CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.	)	Docket No. 50-286
	)	

APPLICANT'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW IN THE FORM OF A PROPOSED INITIAL DECISION

1. Pursuant to Section 104(b) of the Atomic Energy Act of 1954 as amended, Consolidated Edison Company of New York, Inc. ("Applicant") filed with the Commission an application (with twelve amendments) for authority to construct a pressurized water reactor designed for initial operation at 3,025 Mwt. The proposed facility, part of an electric generating unit designated as Indian Point Unit No. 3 ("Unit No. 3"), is to be located on the Applicant's 235-acre Indian Point site (the "site") on the Hudson River in the Village of Buchanan, Westchester County, New York, and will be the third nuclear unit built on the site.[1/]

1/ Summary of Application, page 13; Staff Safety Evaluation, pp. 1 and 4.

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2. Pursuant to a Notice of Hearing issued by the Commission, a prehearing conference was held in Washington, D.C. on March 11, 1969, followed by eleven days of evidentiary hearings (March 25-27, April 28 - May 2, and May 13-15, 1969). In addition to the Applicant and the Regulatory Staff, three persons participated as parties to the proceeding by way of intervention. Two of the interventions -- those by Mary Hays Weik and the Citizens Committee for the Protection of the Environment ("Citizens Committee") -- were in opposition to the application.[2/] This is therefore a "contested proceeding" within the meaning of Section 2.4(n) of the Commission's Rules of Practice. The third -- the Atomic Energy Council of the

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2/ Both Mary Hays Weik and the Citizens Committee filed timely petitions for leave to intervene. Neither the Applicant nor the Regulatory Staff opposed these petitions insofar as they related to matters within the jurisdiction of the Commission and within the issues prescribed by the Notice of Hearing. The petitions were granted by rulings made at the prehearing conference and confirmed by orders of this Board dated March 14, 1969, permitting participation in the proceeding with reference to the issues prescribed by the Commission for consideration by the Board.

State of New York -- chose to intervene under Section 2.714 of the Rules of Practice of the Commission but did not take a position with respect to the application. In addition, numerous persons participated in the hearing by way of limited appearances.

3. The application was reviewed by the Regulatory Staff and the Advisory Committee on Reactor Safeguards, and the conclusions of both are favorable to the granting of a construction permit.[3/]

4. The Applicant has long been active in the field of nuclear energy. It acted in lieu of a general contractor for the construction of its Indian Point Unit No. 1 facility ("Unit No. 1") and has safely operated that unit for over 6-1/2 years. In addition, the Applicant is involved in the design and construction of its Indian Point Unit No. 2 facility ("Unit No. 2"), which is similar to Unit No. 3. Applicant's principal contractor, the Westinghouse Electric Corporation, has had extensive experience in the nuclear field including the construction of a large number of nuclear power reactors.

3/ Staff Safety Evaluation, pp. 65-66, 73.

In addition to its own personnel who are qualified in the nuclear field, the Applicant has engaged a number of independent consultants who have rendered advice and assistance in specialized areas.[4/]

5. The Applicant estimates that the costs of construction of the plant, including transmission facilities and other associated costs, and including the initial reactor core, will total approximately $197 million. It plans to finance these costs in the usual way in which it finances construction costs. The Applicant is one of the largest electric utilities in the country and in 1967 had total operating revenues of $930.8 million and net earnings of $122.9 million.[5/] There is no doubt that it is financially qualified to carry out the activities for which it seeks authorization.[6/]

4/ Summary of Application, pages 7-11; Staff Evaluation, page 58.

5/ Summary of Application, page 11; Testimony of Charles A. Lovejoy, pages 2-5 (follows Tr. 622).

6/ During the hearing, the Citizens Committee took the position that the possible public liability arising from a nuclear incident at Unit No. 1, or during fuel loading of Unit No. 3, was relevant to consideration of the Applicant's financial qualifications to construct Unit No. 3. The Board ruled that such contingencies are not relevant to the issue of financial qualifications since they are covered by the Price Anderson Act arrangements including insurance and indemnity. Tr. 626-651.

6. The Applicant has presented information on the geology, seismology, demography, hydrology, meteorology and other aspects of the site which demonstrates the adequacy of the site for the location of Unit No. 3.[7/]

7. Unit No. 3 will be located adjacent and to the south of Unit No. 1, while Unit No. 2 is being constructed adjacent to and to the north of Unit No. 1.[8/] Unit No. 3 does not share safety-related facilities with either of the other two units. The three units do have a common discharge canal, and there are certain other ties between them such as backup electrical power supplies, city water and sanitary facilities. Unit No. 3 is, therefore, virtually independent of the other two units, and an accident at one unit could not cause an accident at another.[9/]

8. The facility design precludes leakage of radioactive liquids from the processing buildings. Even if such leakage were hypothesized, sources of ground water would not be susceptible to contamination.[10/]

7/ Summary of Application, Part III.

8/ Summary of Application, Appendix B.

9/ Summary of Application, page 47.

10/ Summary of Application, page 15.

9. The Chelsea Pumping Station, located on the Hudson River about 22 miles north of the site, has been used as an emergency source of drinking water by the City of New York. The station is not currently in use and is not likely to be used except during a drought similar to that which occurred in the mid-1960's.[11/] Applicant has analyzed the results of normal operational releases of radioactivity to the river from Unit No. 3 and of releases from the site at the maximum concentrations permitted by 10 CFR 20 and has shown the effect on concentrations of radioactivity at the Chelsea Pumping Station to be insignificant. Applicant has also hypothesized an incredible accident in which all the primary coolant from the facility (assuming 1% fuel failure) is somehow discharged into the river and has demonstrated that the concentrations of radioactivity at the Chelsea Pumping Station would not exceed the concentration limits specified in 10 CFR 20, which are applicable to normal operational releases.[12/] Applicant's calculations assumed conservative river conditions which yielded the highest

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11/ Summary of Application, p. 15; Tr. 863; 869.

12/ Tr. 1019-1020, 1027, 1029-1030, 1919-1920.

concentrations of radioactivity at Chelsea.[13/]

10. Applicant conducted a two-year detailed study of the meteorological conditions at the Indian Point site in connection with the application for licenses for Unit No. 1. The program was begun in 1955 and was completed in 1957. The data developed from this study were used as a basis for determining the atmospheric dispersion conditions which should be applied to Unit No. 3 with respect to normal operational releases and with respect to hypothetical accident conditions.[14/]

11. In determining the maximum permissible amount of gaseous radioactivity which may be released from the facility in compliance with 10 CFR 20, the Applicant assumes that releases are always made in the direction of that sector which would produce the highest calculated dose at the site boundary, using average yearly meteorological conditions.[15/] Applicant has also proposed to develop technical specifications which would provide that the controlled release of

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13/ Tr. 1923-1926.

14/ Preliminary Safety Analysis Report (PSAR) § 1.6; Summary of Application, page 16.

15/ Tr. 683-686.

gaseous radioactive waste would not be made when actual measurements indicate that meteorological conditions are less favorable for dispersion than the average conditions described above.[16/]

12. Applicant has calculated the atmospheric dispersion conditions to be applied to the design basis accident. These calculations contain several conservative assumptions and are based on, among other things, a two meter per second wind speed during the third through the eighth hour following the hypothetical accident. The AEC staff has incorporated as an additional conservatism an assumed condition of a one meter per second wind speed during that period which, coupled with the other assumptions, is considered an extremely improbable event.[17/] However, this difference between the approach of the Applicant and the regulatory staff is not significant since the design of the facility will assure compliance with the Commission's reactor site criteria (10 CFR 100),

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16/ Tr. 719-720.

17/ Fifth Supplement to PSAR, Part 8; Staff Exhibit 1, answers to questions 1 and 2; Tr. 654, 662, 670-671, 1054-1057, 1820.

regardless of which meteorological assumptions are employed.[18/]

13. The Board finds that the two years of meteorological data collected provide an adequate basis for the dispersion calculations for both normal releases and hypothetical accident calculations. Although the meteorological data were collected several years ago, the conditions reported are believed to represent essentially the same conditions as currently exist and which will occur in the future.[19/] Several safety factors have been applied to these data which provide an adequate margin for possible year-to-year variations from the conditions which were reported.[20/] Applicant has resumed taking meteorological measurements at the site and at nearby locations which will supplement the data presently available.[21/]

14. Applicant will operate the three facilities on the Indian Point site in such a manner that the combined normal operating releases of radioactivity from all the

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18/ Staff Safety Evaluation, page 45; Summary of Application, page 44.

19/ Tr. 728, 729, 738, 739.

20/ Tr. 1758-1761.

21/ Tr. 682.

units will not exceed 10 CFR 20 limits. Detailed technical specifications will be developed to assure that the operation of the three units is properly coordinated to achieve this result.[22/] The design of Unit No. 3 and the other two facilities are such that they can be operated and are expected to operate with releases of radioactivity of only a small fraction of that permitted to be discharged in accordance with 10 CFR 20.[23/]

15. The Applicant will measure the radioactivity which will be discharged into the air and water by means of in-plant instrumentation. These measurements, together with the meteorological data available, will be used to determine compliance with 10 CFR 20.[24/]

16. Section 106(e) of 10 CFR 20 sets forth an additional limitation which the Commission may impose upon the Applicant with respect to discharges of radio-

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22/ Tr. 453, 502-503, 689-690, 1480-1488.

23/ Tr. 496-497, 692-693, 1044-1047 (corrected page numbers).

24/ Tr. 454-455, 501-502, 694.

active material.[25/] Although there is no indication in the record that there will be a need for the Commission to implement this section with regard to the Indian Point site, the Applicant has shown that its environmental monitoring program is adequate to enable the Commission

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25/ 10 CFR 20.106(e) reads as follows:

> "(e) In addition to limiting concentrations in effluent streams, the Commission may limit quantities of radioactive materials released in air or water during a specified period of time if it appears that the daily intake of radioactive material from air, water, or food by a suitable sample of an exposed population group, averaged over a period not exceeding one year, would otherwise exceed the daily intake resulting from continuous exposure to air or water containing one-third the concentrations of radioactive materials specified in Appendix 'B', Table II of this part."

This paragraph does not impose a present obligation upon the Applicant to release radioactive material to an unrestricted area in concentrations less than those specified in Appendix "B", Table II of Part 20. However, an additional limitation could be imposed upon the Applicant, in accordance with 10 CFR 20.106(e), should the Commission ever make the determinations specified in this paragraph.

to determine whether further action is required under this section of the regulations.[26/]

17. The record of this proceeding contains a number of general statements regarding the possible effects of low-level radioactivity. There was also some discussion of the relationship between the New York State and U. S. Public Health Service drinking water standards for radioactivity and the AEC standards for radioactive effluents in unrestricted areas set forth in 10 CFR Part 20. The Board believes there is value in having such subjects aired in a public proceeding concerned with the health and safety of the public. However, the Board recognizes that for the purpose of the Board's decision whether there is "undue risk" within the meaning of 10 CFR 50.35(a), it is Part 20 of the Commission's regulations which governs the permissible discharges of radioactive material by the Applicant. The Commission has in promulgating Part 20 defined "undue risk" in this respect, and it is sufficient that the Applicant show that there is reasonable assurance that it will be able to comply with Part 20. The same conclusion applies with regard to a number of statements

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26/ 506-507, 1216-1222, 1953-1960, 2002-2004, 2023.

in the record regarding the possible relationship between temperature and radiological effects. Part 20 sets forth permissible concentrations in unrestricted areas which are applicable to and adequate for discharges regardless of the temperature of the effluent or the environment into which it flows. The Commission's regulations are based upon recommendations of the Federal Radiation Council.[27/]

18. The Board inquired extensively into the program established by the Applicant to monitor radioactivity in the environment of Indian Point. The Applicant will conduct an extensive preoperational and post-operational program to monitor environmental radioactivity, supplemented by a program conducted by the New York University School of Environmental Medicine. This program will consist of sampling of air, particulate, Hudson River water and mud, fish, vegetation, soil, reservoirs, wells, and aquatic vegetation.[28/] The Applicant plans to increase the frequency of sampling the areas sampled and the amount of measurements made should the program indicate a

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27/ Tr. 849, 925-927, 1232.

28/ Tr. 1954-1960.

significant rise in the background level of radioactivity.[29/] Environmental monitoring programs which are pertinent to Indian Point are also conducted by the State of New York (including milk sampling).[30/] The results of the Applicant's environmental monitoring program are regularly reported to the Commission and are available to the public.[31/]

19. The Applicant testified that measurements of radioactivity before it leaves the plant, used in conjunction with conservative calculational techniques, are adequate to determine compliance with regulatory requirements and to confirm that the plant is performing in accordance with design.[32/] The Board recognizes that primary reliance must be placed upon in-plant measurements together with calculations of off-site concentrations. However, since such calculations necessarily involve assumptions, albeit conservative ones, about meteoro-

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29/ Tr. 1959.

30/ Tr. 488-489, 1239-1241, 1983.

31/ Tr. 1959-1961.

32/ Tr. 454-455, 501-502, 694, 700, 718-719.

logical and other conditions affecting the transport of radioactive material discharged from the facility,[33/] the Board believes that the Applicant must also demonstrate that it will conduct an environmental monitoring program which will provide added assurance that regulatory limits are not being exceeded. The Board finds the Applicant has satisfied this requirement.[34/]

20. Unit No. 3 will utilize a pressurized water reactor with an initial rating of 3025 megawatts thermal and 965 megawatts electric. The reactor will operate at a pressure of 2250 psia and an average temperature of 579°F. The reactor core will be approximately eleven feet in diameter and twelve feet long. It will be made up of 193 fuel assemblies, each containing a square array of 204 fuel rods. These fuel rods will be fabricated from Zircaloy tubes filled with fuel pellets of slightly enriched uranium dioxide. Four cooling loops will be used to carry the heat from the reactor.[35/]

33/ Tr. 683, 686-687, 699, 1072-1078.

34/ Tr. 1954-1960, 1962-1987, 2020-2021, PSAR § 1.9, Safety Evaluation 9-10.

35/ Summary of Application, pages 18, 20, 31, 33.

Although the power level of Unit No. 3 is somewhat higher than reactors currently operating, it is lower than other reactors which are already the object of construction permits issued by the Commission. These reactors represent an orderly progression, and information from the operation of these facilities will be available and will be utilized in the startup and operation of Unit No. 3.[36/]

21. Unit No. 3 will employ a steel-lined reinforced concrete containment similar to that used in Unit No. 2 and other facilities approved for construction. This containment will be tested for both structural integrity and leak-tightness prior to operation of the facility and will be capable of periodic testing over the life of the facility. Associated with the containment are a weld channel pressurization system and an isolation valve seal water system, which are intended to provide an essentially leak-tight containment system.[37/]

22. Other engineered safeguards utilized in Unit No. 3 include an emergency core cooling system which

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36/ Summary of Application, pages 18-22; Tr. 1041-1043 (corrected page numbers).

37/ Summary of Application, pages 34-35; Tr. 2049-2050.

in the event of a loss of coolant accident provides borated cooling water to the core, a containment spray system which provides post-accident heat removal and elemental iodine removal capability, a containment air recirculation cooling and filtration system which provides containment atmosphere cooling and organic iodide removal capability, and hydrogen flame recombiners which can remove hydrogen from the post-accident containment atmosphere. Redundancy is provided in each of these systems.[38/] Redundant off-site power sources are available to supply emergency power to the safeguards systems, and these are backed up by three on-site emergency diesel generators for Unit No. 3 any two of which can supply the necessary power for engineered safeguards.[39/]

23. In order to meet the Commission's reactor site criteria (10 CFR 100) under the conditions of the design basis accident and the worst hypothesized meteorological conditions, the operation of some combination of these engineered safeguards systems is essential. The Board has considered at length the adequacy of the engineered

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38/ Summary of Application, pages 36-38, 44-46.

39/ Summary of Application, page 41.

safeguards to perform their intended function, particularly the containment spray system and the charcoal filter system. In evaluating performance of the containment spray system and the charcoal filter system, the conservative position is taken that no credit is given for operation of the emergency core cooling system, the isolation valve seal water system, and the containment weld channel pressurization system.[40/]

24. The Applicant has presented evidence and referenced a number of containment spray tests at the Nuclear Safety Pilot Plant (NSPP) and Containment Systems Experiment (CSE) which justify the elemental iodine removal coefficients used by the Applicant for accident analysis. It was shown that experimental results from the NSPP testing could be conservatively predicted by the theoretical model; that is, theory predicted a slower iodine removal rate than experimental evidence. The CSE experimental results, however, were 92 per cent of that predicted. These experiments included the effects of variances in spray alkalinity and iodine concentration; simultaneous

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40/ Applicant's Exhibit 6 (See Tr. 1697); Summary of Application, page 45; Staff Exhibit 1, Question 3.

occurrence of heat transfer to spray by steam condensation; and degradation of spray surface area due to droplet coalescence.[41/]

25. CSE data indicated that experimental confirmation of the theoretical model did not extend beyond a reduction by a factor of 100 of the original inorganic iodine vapor. However, evidence was presented which indicated the dose reduction factor achieved by the sprays removing elemental iodine is relatively insensitive to the iodine decontamination factor.[42/] The AEC Staff interprets these iodine removal data more conservatively than does the Applicant and, therefore, predicts higher accident doses. However, in any event the predicted accident doses are within 10 CFR 100 guidelines.[43/]

26. The Board is concerned that more definitive information is not yet available concerning the capability of the containment sprays to perform as expected. However, the Board recognizes that the containment spray

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41/ Tr. 1708-1710, 1713-1718.

42/ Tr. 2147-2148, 2161-2164.

43/ Summary of Application, page 44; Applicant's Exhibit 6 (see Tr. 1697); Staff Safety Evaluation, pages 33-34, 45.

system is a safety feature or component of Unit No. 3 which requires research and development. Accordingly, it is not necessary under 10 CFR 50.35(a) (3) for the Applicant to show that all the information required to demonstrate the effectiveness of this system is already available. As discussed below, a satisfactory research and development program will be carried out to provide additional assurance that the sprays will perform as expected.[44/]

27. Since most of these engineered safeguards systems are required to function only in the highly unlikely event of a serious accident, it is especially important to have assurance, through testing programs, that these systems are capable of performing the intended function for the period of time required. The Board wishes to stress the need for functional tests of the systems in as complete a manner as is practicable. The Board recognizes that in the case of the containment spray system a complete functional flow test is impractical because of the likelihood of damage to certain of the components

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44/ Second Supplement to Summary of Application, answer to Question 13, pages 13-35 to 13-41.

and materials inside the containment, resulting from operation of the sprays with or without the sodium hydroxide.[45/] The Board believes that the alternative which Applicant has proposed, involving functional testing of two portions of the system (the portion inside and the portion outside the containment) will provide assurance of the functional capability of the system. The spray initiation signal can be simulated which will start pumping water to be delivered up to the containment isolation valve and recirculated to the refueling water storage tanks. This functionally establishes operability of the system outside the containment. Continuity from the containment isolation valves to the spray nozzles can be verified by passing air through the system. In this manner, the functional capability of the entire system can be demonstrated.[46/]

28. With regard to the heat removal capability of the sprays, the record shows that since thermal equilibrium is reached within a few feet of the top of the

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45/ Tr. 1577-1579, 1584-1587.

46/ Tr. 1568-1576, 1600-1602.

containment, droplet size is not critical and the required capability will be achieved.[47/]

29. The containment air recirculation cooling system utilizes charcoal filters for the specific purpose of removing organic iodides. The requirements for these filters is based upon the meteorological model utilized by the Staff and upon the conservative assumption that 10 per cent of the iodine released to the containment is in the organic form.[48/] The Applicant expects that exchange probabilities in excess of 70 per cent per pass can be achieved, but has conservatively assumed a probability of 50 per cent. Assuming inorganic iodine is removed by sprays as expected, an organic iodine exchange probability of 6 per cent would be required to meet 10 CFR 100 guidelines.[49/] The Staff similarly concludes, using its assumptions for iodine removal, that a 5 per cent probability is required.[50/]

47/ Tr. 976-977.

48/ Staff Safety Evaluation, pages 33-34; Tr. 1039-1040 (corrected pages), 1374-1377.

49/ Tr. 1616, 2051.

50/ Staff Safety Evaluation, page 45; Tr. 2059.

30. A research and development program is being carried out to demonstrate the organic iodide removal capability of the filters at relative humidity conditions approaching 100 per cent. If the results of this program are less favorable than anticipated, the requisite efficiency can be achieved by the installation of additional equipment to control the humidity.[51/]

31. The Applicant has supplied information regarding the ability of the cabling, motors and instrumentation required to function in the post-accident environment within containment to withstand the expected conditions of temperature, pressure, humidity and radiation for the requisite period of time.[52/] While the results to date confirm this capability, further tests will be conducted particularly with regard to fan motors, cables, insulation, and lubricants, under combinations of these conditions more closely approximating the actual post-accident environmental condition.[53/]

51/ Second Supplement to Summary of Application, Answer to Question 13, pages 13-42 to 13-47.

52/ Tr. 992-995, 2071-2074.

53/ Tr. 994, 1327-1328.

32. The proposed facility incorporates several design features for which there is required further research and development during the development of the final design. The Applicant has described the following research and development programs to develop the necessary additional data:

(1) Core stability evaluation, designed to provide information on the necessary detection and control systems with respect to potential xenon-induced power oscillations;

(2) Rod burst program, designed to determine fuel-clad deformation characteristics and the extent of flow blockage under simulated loss of coolant accident conditions;

(3) Containment spray program, designed to develop design details for a containment spray system utilizing chemically reactive materials to promote radioactive iodine absorption;

(4) Charcoal filter testing program, designed to delineate further the effects of

moisture on the efficiency of organic iodine decontamination by the charcoal filter system to be installed in Unit No. 3.[54/]

33. This work is being conducted in Westinghouse laboratories, in operating reactors and in AEC facilities. The schedule for developing this technical information is compatible with the schedule for completion of construction of Unit No. 3. Definite results will be available before the plant design is complete, and in time to consider alternatives in development programs and changes in design or in plant operating conditions in the event that the program results do not corroborate their objectives. The Final Safety Analysis Report will include the necessary details on these programs.[55/]

34. The evidence in the record of this proceeding indicates that satisfactory progress is being made with respect to the identified research and development programs and that they are reasonably designed to achieve

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54/ Summary of Application, Section VIII; Second Supplement to Summary of Application, Answer to Question 13, pages 13-1 to 13-47.

55/ Summary of Application, page 48.

their objectives.[56/] The Board devoted particular attention to the research and development programs pertaining to the containment spray system and charcoal filters.

35. In addition to the above described four programs, other research and development is being conducted which will give added confirmation of the conservatism of the proposed design for Unit No. 3. These programs include the following:

A. Burnable Poison Program

B. Saxton Loose Lattice Irradiation Program

C. Zorita Irradiation Program

D. In-Core Detector Program

E. ESADA DNB Program

F. Failed Fuel Monitor Program

G. Loss of Coolant Analysis Program

H. FLECHT (Full Length Emergency Cooling Heat Transfer Test) Program

I. Flashing Heat Transfer Program

56/ Summary of Application, Part VIII; Second Supplement to Summary of Application, Answer to Question 13, pages 13-1 to 13-47; Staff Evaluation, page 57.

J. Blowdown Forces Program

K. Reactor Vessel Thermal Shock Analysis Program[57/]

36. With respect to the problem of thermal shock of the reactor vessel after initiation of emergency core cooling, the available data indicate that the facility can safely operate for a period of time well in excess of that required to obtain all necessary corroborative data on material properties. Additional confirming data will be available by the time Unit No. 3 will be ready to operate. Provisions have also been made for installation of a back-up cavity flooding system, which has been satisfactorily described in the record.[58/]

37. The Applicant has described a comprehensive quality assurance plan for the design and construction of Unit No. 3.[59/] Since Unit No. 3 is a "turnkey" project,

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57/ Second Supplement to Summary of Application, Answer to Question 13, pages 13-48 to 13-78.

58/ Summary of Application, pages 38-39; Second Supplement to Summary of Application, Answer to Question 13, pages 13-76 to 13-78; Staff Exhibit 1, Answer to Question 21.

59/ Applicant's Exhibit 3 (Supplement to Summary of Application); Tr. 1509-1510.

the Westinghouse Electric Corporation and its contractors will carry out a large portion of the quality assurance efforts on this project. Accordingly, the Applicant requires them to maintain comprehensive quality assurance programs which are set forth in the plan. These programs provide for written procedures which are reviewed by the Applicant. The Applicant will further carry out its quality assurance responsibilities by monitoring the activities of Westinghouse and its contractors in critical areas through an independent detailed vendor surveillance program, a continuous on-site surveillance program, and a general review of engineering and safety analysis activities. In fulfilling these responsibilities, the Applicant will utilize the services of its own personnel; of its quality control and quality assurance surveillance agency, the U. S. Testing Company; and of its nuclear engineering consultant, the Southern Nuclear Engineering Company.[60/]

38. At the hearing the Citizens Committee sought to adduce evidence concerning the thermal effects of

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60/ Id. at 1-2.

operation of Unit No. 3 on the environment, which the Board determined to be inadmissible.[61/] The Commission has consistently held that consideration of these matters in a facility licensing proceeding is beyond its jurisdiction. The Commission's position has been incorporated in its "Statement of General Policy" appended to Part 2 of its Regulations (10 CFR Part 2 Appendix A, Section III.(c).(7).) and has recently been upheld on review by the U. S. Court of Appeals for the First Circuit.[62/]

39. In its petition for leave to intervene the Citizens Committee contended that the Applicant has not met its burden of proof in this proceeding unless it has demonstrated that the benefits from operation of the proposed facility accruing to the public who are subjected to the risks created thereby are of such magnitude that a finding may be properly made that the proposed facility can be constructed and operated without undue risk to the health and safety of the public. Although

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61/ Tr. 481-483.

62/ State of New Hampshire v. Atomic Energy Commission, 406 F.2d 170 (1st Cir. 1969).

the Board finds nothing in the record to indicate that such benefits do not exist, the Board is of the opinion that the benefits accruing from the private development of nuclear power have been determined by Congress by enactment of the Atomic Energy Act of 1954, as amended, and that the only demonstration which the Applicant is required to make in this respect is that the proposed facility falls within one of the categories of facilities licensable under the Act. Beyond this the Applicant's duty is to supply sufficient information to enable the Board to assess the risk within the framework of the Commission's regulations which, among other things, set standards for protection of the public against exposure to radioactivity and provide guidelines for the siting of such facilities. This we believe the Applicant has done.

40. Upon the basis of consideration of the entire record in this proceeding, and in the light of the foregoing which constitutes findings of fact and conclusions of law, the Atomic Safety and Licensing Board further finds and concludes as follows:

(1) In accordance with the provisions of 10 CFR §§ 50.35 (a)

a. The Applicant has described the proposed design of the facility, including, but not limited to, the principal architectural and engineering criteria for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

b. Such further technical or design information as may be required to complete the safety analysis and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

c. Safety features or components, if any, which require research and development have been described by the Applicant and the Applicant has identified, and there will be conducted, a research and development program reasonably designed to

resolve any safety questions associated with such features or components; and

d. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

(2) The Applicant is technically qualified to design and construct the proposed facility;

(3) The Applicant is financially qualified to design and construct the proposed facility; and

(4) The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public.

41. IT IS ORDERED, that the Director of Regulation

is authorized to issue a provisional construction permit to Consolidated Edison Company of New York, Inc. substantially as set forth in Appendix "A" to the Notice of Hearing on this Application, which was published in the Federal Register on February 5, 1969 (34 Fed. Reg. 1741). It is further ordered, in accordance with 10 CFR Sections 2.760, 2.762 and 2.764, that this Initial Decision shall be effective immediately and shall constitute the final action of the Commission forty-five days after the date of issuance, subject to the review thereof and further decision by the Commission upon its own motion or upon exceptions filed pursuant to the cited rules.

Respectfully submitted,

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Dated: May 28, 1969