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bcc:

MAY 20 1970

Docket No. 50-333

Mr. William S. Chapin
 General Manager and Chief Engineer
 Power Authority of the State
 of New York
 10 Columbus Circle
 New York, New York 10019

Dear Mr. Chapin:

A copy of a Provisional Construction Permit No. CFFR-71, which has been issued to the Power Authority of the State of New York for authorization to construct the James A. FitzPatrick Nuclear Power Plant, is enclosed, together with a related Notice which has been transmitted to the Office of the Federal Register for filing and publication.

The Permit has been issued pursuant to the Initial Decision of the Atomic Safety and Licensing Board. A copy of the Decision is enclosed.

Sincerely,

Original Signed by
 Peter A. Morris
 Peter A. Morris, Director
 Division of Reactor Licensing

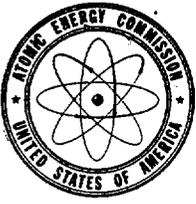
Enclosures:

1. Construction Permit No. CFFR-71
2. Federal Register Notice
3. Initial Decision

cc: Arvin E. Upton, Esq.
 Thomas Y. Moore, Jr., Esq.

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OFFICE	RL:PWR <i>Blunt</i>	RL:PWR-1 <i>Lee</i>	RL:PWR-1 <i>Vassallo</i>	RL:PWR-1 <i>Muller</i>	RL:PWR <i>DeYoung</i>	RL <i>Morris</i>
SURNAME	Blunt:pjf	Lee	Vassallo	Muller	DeYoung	Morris
DATE	4/24/70	4/16/70	4/16/70	4/16/70	4/16/70	4/17/70



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

POWER AUTHORITY OF THE STATE OF NEW YORK

(James A. FitzPatrick Nuclear Power Plant)

Docket No. 50-333

PROVISIONAL CONSTRUCTION PERMIT

Construction Permit No. CPPR-71

1. Pursuant to § 104 b. of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter 1, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the order of the Atomic Safety and Licensing Board, the Atomic Energy Commission (the Commission) hereby issues a provisional construction permit to the Power Authority of the State of New York (the applicant) for a utilization facility (the facility), designed to operate at 2436 megawatts (thermal) described in the application and amendments thereto (the application) filed in this matter by the applicant and as more fully described in the evidence received at the public hearing upon that application. The facility, known as James A. FitzPatrick Nuclear Power Plant will be located at the applicant's site on the shore of Lake Ontario in Oswego County, approximately seven miles northeast of Oswego, New York.
2. This permit shall be deemed to contain and be subject to the conditions specified in §§ 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:
 - A. The earliest date for the completion of the facility is December 31, 1972, and the latest date for completion of the facility is September 30, 1973.
 - B. The facility shall be constructed and located at the site as described in the application near Oswego in Oswego County, New York.

- C. This construction permit authorizes the applicant to construct the facility described in the application and the hearing record in accordance with the principal architectural and engineering criteria set forth therein.
3. This permit is provisional to the extent that a license authorizing operation of the facility will not be issued by the Commission unless (a) the applicant submits to the Commission, by amendment to the application, the complete final safety analysis report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; and (c) the applicant submits proof of financial protection and the execution of an indemnity agreement as required by § 170 of the Act.

FOR THE ATOMIC ENERGY COMMISSION

Original Signed by
Peter A. Morris

Peter A. Morris, Director
Division of Reactor Licensing

Dated at Bethesda, Maryland
this 20th day of May 1940

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-333

POWER AUTHORITY OF THE STATE OF NEW YORK

(James A. FitzPatrick Nuclear Power Plant)

NOTICE OF ISSUANCE OF PROVISIONAL CONSTRUCTION PERMIT

Notice is hereby given that, pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated MAY 20 1970, the Director of the Division of Reactor Licensing has issued Provisional Construction Permit No. CPPR-71 to the Power Authority of the State of New York for construction of a boiling water nuclear reactor at the applicant's site approximately seven miles northeast of Oswego in Oswego County, New York. The reactor, known as the James A. FitzPatrick Nuclear Power Plant, is designed for initial operation at approximately 2,436 thermal megawatts with a net electrical output of approximately 848 megawatts.

A copy of the Initial Decision is on file in the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C.

Dated at Bethesda, Maryland, this 20th day of May 1970.

FOR THE ATOMIC ENERGY COMMISSION

Original Signed by
Peter A. Morris
Peter A. Morris, Director
Division of Reactor Licensing

UNITED STATES OF AMERICA

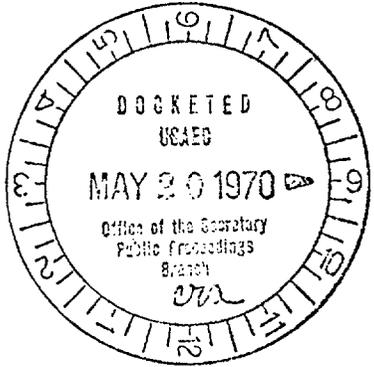
ATOMIC ENERGY COMMISSION

In the Matter of)
POWER AUTHORITY OF THE)
STATE OF NEW YORK)

DOCKET NO. 50-333

INITIAL DECISION

ATOMIC SAFETY AND LICENSING BOARD



Dr. David B. Hall, Member
Dr. Clarke Williams, Member
James P. Gleason, Chairman

APPEARANCES

Leonard M. Trosten, Esq., Arvin E. Upton, Esq., Lex Larson, Esq., Thomas F. Moore, Esq., Scot B. Lilly, Esq., on behalf of the Applicant.

Neil J. Newman, Esq., Thomas F. Engelhardt, Esq., on behalf of the Regulatory Staff, Atomic Energy Commission.

Robert Wart, New York, N.Y., Limited Appearance.

Herman Forrester, Chairman, New York State Conservation Council, Limited Appearance.

Floyd Nolan, on behalf of Village of Pulaski, Limited Appearance.

Hugh A. Gilbert, Esq. on behalf of State Senator H. Douglas Barclay and Assemblyman Edward F. Crawford, Limited Appearance.

Martin Rose, President, Oswego County Labor Council, Limited Appearance.

Harold Thorpe, Oswego Building and Construction Trades Council, Limited Appearance.

Alfred A. Delgado, Point Peninsula, N. Y., Limited Appearance.

STATEMENT OF PROCEEDINGS

1. Pursuant to Section 104 (b) of the Atomic Energy Act of 1954 as amended (the "Act"), the Power Authority of the State of New York (the "Authority") has applied for authority to construct a boiling water reactor designed for initial operation at core power levels of 2436 megawatts (thermal), to be part of the Authority's nuclear electric generating plant known as the James A. Fitzpatrick Nuclear Power Plant. The plant will be located on the shore of Lake Ontario adjacent to the Nine Mile Point Nuclear Station in Oswego County, New York owned and operated by Niagara Mohawk Power Corporation ("Niagara Mohawk").

2. The combined application for licenses includes both the Authority and Niagara Mohawk as co-applicants for authority to operate the reactor, taking into account the fact that Niagara Mohawk will operate the reactor under contract with the Authority. For the purpose of obtaining a provisional construction permit, however, the Authority is considered the sole applicant. The Notice of Hearing, referred to hereafter, and the attached proposed form of provisional construction permit inadvertently included Niagara Mohawk as a co-applicant

for the provisional construction permit. This was noted by counsel for the staff and the Authority at a pre-hearing conference held in Washington, D. C. on March 18, 1970. At the hearing the staff presented as exhibits corrected versions of these two documents, reflecting the fact that the Authority is the sole applicant for a provisional construction permit. The Application was filed on December 31, 1968, and fifteen amendments thereto have been subsequently filed.

3. The Application was reviewed by the regulatory staff (staff) of the Atomic Energy Commission (Commission) and the Advisory Committee on Reactor Safeguards (ACRS). Both the staff and the ACRS have concluded that there is reasonable assurance that the proposed facility can be constructed and operated at the proposed site without undue risk to the health and safety of the public.

4. In accordance with the requirements of the Act and a Notice of Hearing published in the Federal Register on February 27, 1970 (35 Fed. Reg. 3837), which set out the issues to be considered and initially decided by an Atomic Safety and Licensing Board, a public hearing was held before this duly constituted Atomic Safety and Licensing Board (Board) in Pulaski, New York on March 31, 1970, to consider whether a provisional

construction permit should be issued to the Authority.

5. The only parties to the proceeding are the Authority and the staff. No petitions for leave to intervene were filed in this proceeding and accordingly this is not a contested proceeding within the meaning of section 2.4(n) of the Commission's regulations.

6. Limited appearances were made by Mr. Robert Wart; Mr. Herman Forrester, on behalf of the New York State Conservation Council; Mr. Floyd Nolan, on behalf of the Village of Pulaski, New York; Mr. Hugh A. Gilbert on behalf of State Senator H. Douglas Barclay, representing Oswego, Jefferson and St. Lawrence Counties; and State Assemblyman Edward F. Crawford, representing Oswego and part of Oneida Counties; Mr. Martin Rose, President of the Oswego County Labor Council; Mr. Harold Thorpe, on behalf of the Oswego Building and Construction Trades Council; and Mr. Alfred A. Delgado. Pursuant to section 2.715(c) of the Commission's regulations, the New York State Atomic Energy Council also participated in the hearing.

FINDINGS OF FACT

7. The Authority is a public benefit corporation

of the State of New York which has been engaged in the generation, transmission and sale of electricity since 1958. The Authority will finance the construction of the plant through the issuance of notes and/or revenue bonds. The record shows that the Authority is financially qualified to design and construct the proposed facility with the safety-related features and provisions of the proposed design.

8. The Authority has had experience in the design and construction of large power projects, including hydroelectric plants at Massena, New York and Niagara Falls, New York with a total generating capability of 3,200,000 kilowatts. The Authority is presently expanding its own engineering staff in a manner appropriate to its responsibilities for design and construction. Both the General Electric Company, which will furnish the nuclear steam supply system, and Stone & Webster Engineering Corporation, which will perform architect-engineering and construction management services for the plant, have had extensive experience in the nuclear field within their respective scopes of duties.

9. Niagara Mohawk will have full responsibility for the safe operation of the plant. The Authority will own the plant and will control the marketing of the power it generates.

Appropriate to its role as future operator, Niagara Mohawk is advising and assisting the Authority by participating in the continual review of plant design and thereby making available to the Authority the benefit of its experience in the design, construction and operation of its Nine Mile Point facility. This involvement of Niagara Mohawk will increase as the operating stage is approached. Similarly, the Authority, through representatives at the plant and through participation in the groups responsible for review of plant operation, will make available to Niagara Mohawk the benefit of its knowledge developed during design and construction.

10. The proposed plant will be located on the Authority's 702-acre site fronting on Lake Ontario in Oswego County, New York, adjacent to and east of the site of Niagara Mohawk's Nine Mile Point Nuclear Power Station. The Fitz-Patrick Plant will be about 3,000 feet east of the Nine Mile Point Plant. The two sites with their contiguous exclusion areas will be considered as one for the purpose of determining compliance with the requirements of Part 20 of the Commission's regulations concerning release of radioactive effluents to unrestricted areas.

11. Since the two plants have basically the same site characteristics, the Authority has been able to take advantage of the site studies already made for the Nine Mile Point Plant. The Authority has made additional site studies, particularly in the areas of lake characteristics, meteorology, geology and seismology. The record supports the adequacy of the site for the location of the proposed plant, taking into account the presence of the Nine Mile Point Plant. The plant design adequately takes into account the meteorological, hydrological, limnological and ground water conditions, as well as the possibility of tornadoes, floods, earthquakes, and other natural phenomena.

12. A detailed environmental monitoring program has been established for the Nine Mile Point Station now in operation. This program includes the monitoring of air, rain water, local milk supplies, lake water, and aquatic life. This program has been expanded to take into account the presence of the second facility.

13. The Board notes that the New York State Atomic Energy Council was established by statute to serve as the coordinating body for the interests of various state agencies and political subdivisions which may affect or be affected by

the growth in use of various forms of atomic energy in the State of New York. The staffs of the appropriate agencies represented on the Council have reviewed the plant design as it relates to environmental releases. They have concluded that the discharges of radioactivity from the proposed facility can be maintained within appropriate limits.

In view of the multiple radiological discharges from nuclear plants in the United States and Canada into Lake Ontario, the Council and its agencies propose to continuously monitor and review the releases and their effect on the environment. Further, the plans and proposals for the handling of cooling water within New York State's established thermal criteria have been submitted to the Department of Health (a member of the Council) and are in the process of final review.

14. The proposed reactor is designed to operate initially at a rated core power level of 2436Mwt. The design of the plant's major systems and components which bear significantly on the acceptability of the facility at the proposed site under the site criteria guidelines identified in Part 100 of the Commission's regulations have been analyzed and evaluated by the Authority and the staff at a higher level of 2550 Mwt, the ultimate reactor power level expected for the reactor.

15. The nuclear steam supply system is a single cycle, forced circulation, boiling water reactor in which steam is generated for direct use in the steam turbine. The nuclear steam supply system is similar to other boiling water reactors now being designed and built by the General Electric Company for plants being constructed under AEC construction permits. The reactor is fueled by slightly enriched uranium dioxide pellets sealed in Zircaloy-2 tubes. Reactor power is controlled by variations in the flow of cooling water through the core and by movement of control rods. The primary containment system, consisting of a dry well and a pressure suppression chamber, is designed to withstand the temperatures and pressures resulting from a pipe break within the primary containment systems. The reactor building and standby gas treatment system comprise a secondary containment system for the control of airborne radioactive material under accident conditions.

16. In addition to the containment structure and its cooling systems, the plant will have a number of engineered safety features designed for limiting the consequences of accidents, including the highly unlikely loss-of-coolant accident. The engineered safety features include the emergency core cooling

system, the reactor core isolation cooling system, steam line flow restrictors, and features which function to limit the rate and amount of accidental positive reactivity insertion.

17. The applicant has identified a number of research and development programs undertaken to obtain the final design parameters of certain of the plant systems for all boiling reactors. These concern hydrogen control, linear heat generation rate, core spray effectiveness, steam line isolation valve testing, depressurization performance of the high pressure core injection system, effect of fuel rod failure on emergency core cooling system performance, and effects of fuel bundle flow blockage. The objectives of the research and development programs have been defined and a schedule for the development of the information prior to completion of construction of the plant has been established.

18. The Authority has established a comprehensive quality assurance program for the design and construction of the facility which meets the intent of the standards set out in the proposed Appendix B to 10 CFR Part 50, "Quality Assurance Criteria for Nuclear Power Plants". The program delineates the quality assurance responsibilities of each organization involved in the project, with emphasis upon the manner in which the

Authority will assure itself of the quality of the completed project. While day-to-day responsibility for the project quality rests with the Authority's principal contractors, the Authority, to carry out its overall responsibility, has established a quality assurance organization to audit the activities of its contractors both on site and in vendors' shops.

19. The activities to be conducted under the provisional construction permit will be within the jurisdiction of the United States, and all of the trustees and principal officers of the Authority are United States citizens. The Authority is not owned, controlled or dominated by an alien, a foreign corporation or a foreign government. The activities to be conducted do not involve any Restricted Data, but the Authority has agreed to safeguard any such data which might become involved in accordance with the Commission's regulations. Special nuclear material for use as fuel in the proposed facility will be subject to Commission regulations and will be obtained from sources of supply available for civilian purposes so that there will be no diversion of such material from military purposes.

20. The application and the proceeding thereon comply with the requirements of the Act and the Commission's regulations.

There are no unresolved safety questions pertinent to the issuance of the provisional construction permit.

CONCLUSIONS AND ORDER

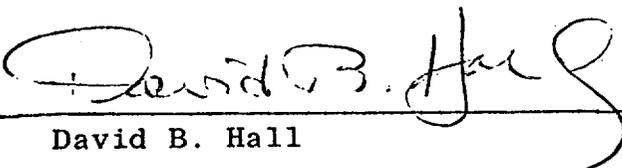
21. Upon consideration of the entire record in this proceeding and the foregoing findings of fact, this Board concludes that the application and the record of the proceeding contain sufficient information, and the review of the application by the staff has been adequate to support (1) the findings proposed to be made by the Director of Regulation and (2) the issuance of the provisional construction permit as proposed by the Director of Regulation.

22. IT IS ORDERED that the Director of Regulation is authorized to issue a provisional construction permit to the Power Authority of the State of New York substantially in the form of the Appendix to the "Notice of Hearing on Application for Provisional Construction Permit" in this proceeding.

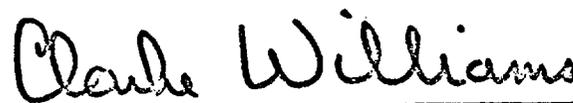
IT IS FURTHER ORDERED that this Initial Decision shall be effective immediately upon issuance and shall constitute

the final decision of the Commission, subject to any review thereof pursuant to Commission's rules.

ATOMIC SAFETY AND LICENSING BOARD

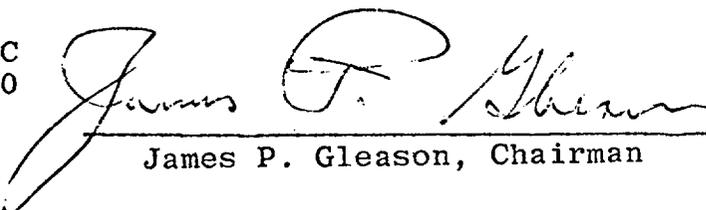


David B. Hall



Clarke Williams

Dated at: Washington, DC
This 20 day of May, 1970



James P. Gleason, Chairman