



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

PUBLIC SERVICE COMPANY OF INDIANA, INC.

WABASH VALLEY POWER ASSOCIATION, INC.

DOCKET NO. STN 50-546

MARBLE HILL NUCLEAR GENERATING STATION, UNIT 1

CONSTRUCTION PERMIT

Construction Permit No. CPPR-170

1. The Nuclear Regulatory Commission (the Commission) having found that:
 - A. The application for construction permits complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission; there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission; and all required notifications to other agencies or bodies have been duly made;
 - B. Public Service Company of Indiana, Inc. and Wabash Valley Power Association, Inc. (the applicants) have described the proposed design of the Marble Hill Nuclear Generating Station, Unit 1 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design, and have identified the major features or components incorporated therein for the protection of the health and safety of the public;
 - C. 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;
 - D. Safety features or components, if any, which require research and development have been described by the applicants and the applicants have identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

- E. 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;
 - F. Public Service Company of Indiana, Inc. is technically qualified to design and construct the proposed facility on behalf of itself and the co-applicant, Wabash Valley Power Association, Inc.;
 - G. The applicants are financially qualified to design and construct the proposed facility. However, the applicants are required to inform the Commission if the U.S. Rural Electrification Administration ever attempts to take any action, under color of authority under the loan contract, which the applicants deem to be at variance either with Public Service Company of Indiana's technical judgment or any Commission regulations or requirements.
 - H. 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; and
 - I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 (formerly Appendix D to 10 CFR Part 5J) of the Commission's regulations and all applicable requirements have been satisfied.
2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities", and pursuant to the Partial Initial Decision, dated August 22, 1977, the Partial Initial Decision, dated December 9, 1977, and the Initial Decision dated April 4, 1978, issued by the Atomic Safety and Licensing Board, the Nuclear Regulatory Commission hereby issues a construction permit to the applicants for a utilization facility designed to operate at 3411 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the applicants and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Marble Hill Nuclear Generating Station, Unit 1, will be located on the applicants' site in Saluda Township, Jefferson County, Indiana.

3. This permit shall be deemed to contain and be subject to the conditions specified in Section 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 January 1, 1982, and the latest date for completion is January 1, 1984.
 - B. The facility shall be constructed and located at the site as described in the application, in Saluda Township, Jefferson County, Indiana.
 - C. This construction permit authorizes the applicants to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and commitments set forth therein.
 - D. Pursuant to the agreement on the concerns of the Louisville Water Company (LWC), dated August 15, 1977, this permit includes the following seven conditions:
 - a. The requirements for the Marble Hill preoperational radiological monitoring program are outlined in the NRC Staff's Final Environmental Statement (FES) Section 6.1.2 (including Table 6.1). The FES requires that the closest LWC water intake and Louisville drinking water be monitored as indicated and in accordance with current and future requirements of NRC Regulatory Guide 4.8. The applicants agree to commence the LWC water intake and Louisville drinking water aspects of the preoperational radiological monitoring program two years prior to operation of the Marble Hill facility. The applicants and the NRC staff agree that such monitoring shall be required to be continued as part of the operational monitoring program. The monitoring shall comply with all applicable current or future NRC Regulatory Guides, Federal regulations and environmental technical specifications throughout the operation of the Marble Hill facility.
 - b. The closest LWC water intake shall be designated by the LWC and agreed to by the applicants and approved by the NRC staff at the time for implementation of the preoperational radiological monitoring program.

- c. LWC shall have access to all monitoring conducted by the applicants at its water intake and shall be furnished with copies of all test results and all reports of monitoring and test results furnished by the applicants to the NRC.
 - d. The applicants will notify LWC within 60 minutes after giving any required notification to the NRC of any release of radioactive materials in excess of the limits to be defined in the technical specifications. The applicants agree to notify LWC of the contents of any press release by the applicants regarding radioactive discharges to the Ohio River prior to issuance.
 - e. The applicants agree to provide LWC with the unlisted number of the shift supervisor of the Marble Hill facility.
 - f. The applicants will include provisions in their Emergency Plan requiring direct early notification to LWC in the event of any emergency situation.
 - g. As used herein (paragraph 3.D. of this permit), the term applicants shall mean the party or parties determined by a final order (not subject to further Commission or judicial review) to be solely or jointly responsible for carrying out the obligations of this agreement.
- E. The Public Service Company of Indiana, Inc. is subject to the following antitrust conditions:

I. Definitions

(a) "Applicable area" means those counties in the State of Indiana and any other State in which, now or in the future, the Licensee has electrical facilities.

(b) "Bulk power" means electric capacity and any attendant energy supplied or made available by one electric utility to another for resale.

(c) "Licensee" means Public Service Company of Indiana, Inc., any successor corporation, or any assignee of this applicant.

(d) "Neighboring entity" means a financially responsible private or public corporation, governmental agency or authority, municipality, rural electric membership corporation or cooperative, person, or lawful association of any of the foregoing, which owns, controls or operates or in good faith proposes to own, control, or operate facilities for the generation of electricity, which meets each of the following criteria: (1) its existing or proposed facilities are technically feasible of interconnection with those

of licensee; (2) its existing or proposed facilities are fully or partially within the applicable area; (3) it is, or upon commencement of operations will be, subject to regulation with respect to rates and/or service under the laws of the State of Indiana or any other State in which licensee may serve, or under the Federal Power Act, or it is legally exempted from such regulation; and (4) it is authorized to transact business and operate as a public utility under the laws of the State of Indiana or any other State in which licensee may serve, or it is not legally required to obtain such authority.

(e) "Neighboring distribution system" means a financially responsible private or public corporation, governmental agency or authority, municipality, rural electric membership corporation or cooperative, person, or lawful association of any of the foregoing, which engages or in good faith proposes to engage in the distribution of electric energy at retail, whose existing or proposed facilities are technically feasible of connection with those of licensee, and which meets each of the criteria numbered (2) through (4) in subparagraph (d) above.

(f) "Cost" means any administrative, general, operation and maintenance expenses, taxes, capital costs and a fair and reasonable return on licensee's investment, which are properly allocable to the particular service or transaction and the facilities involved in the transaction.

II. Interconnections

(a) Licensee will enter into written agreements to interconnect and operate in parallel with any neighboring entity.

(b) Interconnection agreements will not be limited to lower voltages when higher voltages are requested and available.

(c) Interconnection agreements shall provide for the necessary operating procedures and control equipment as required for safe and prudent operation of the interconnected systems.

(d) The cost of interconnection will be mutually negotiated and shared on the basis of benefits derived from the interconnection by each party after consideration of the various transactions for which the interconnection facilities are to be utilized.

(e) Interconnection agreements will not embody provisions which impose limitations upon the use or resale of capacity and energy sold or exchanged pursuant to the agreement except as may be necessary to protect the reliability of licensee's system.

(f) Interconnection agreements will not prohibit the parties from entering into other interconnections or coordination agreements, but may include appropriate provisions to assure that (1) licensee receives sufficient notice of such additional interconnection or coordination to protect the reliability of its system, (2) the parties jointly consider and mutually agree upon such measures, if any, as are reasonably necessary for safety and for the protection of the reliability of licensee's system, and (3) licensee is fully compensated for any additional costs incurred or expenditures made resulting from such other interconnections or coordination agreements.

III. Reserve Coordination

(a) Licensee and its neighboring entities with which it interconnects shall jointly establish and mutually agree in writing upon a level of minimum reserves to be installed or provided as necessary to maintain a total reserve margin sufficient, as determined by probability calculations and prudent engineering judgment, to provide adequate reliability of power supply to the interconnected systems. The reserve responsibility thus determined shall be calculated as a percentage of the estimated annual peak load (adjusted to exclude purchases of firm power) of the interconnected systems. No party to the interconnection shall be required to install or provide more than such percentage as its minimum reserve margin. No party to the interconnection shall be required to provide reserve capacity for that portion of its estimated annual peak load which is met through firm power purchases.

(b) Licensee will sell emergency power to any neighboring entity which maintains the minimum reserve margin established pursuant to paragraph (a) above. Licensee shall engage in such transactions if and when capacity and energy are available for such transactions from its own generating resources or from those of interconnected electric systems, but only to the extent that it can do so without impairing service to its customers. Emergency power shall be furnished to the fullest extent available from the supplying party and desired by the party in need and at rates which compensate licensee for its cost.

(c) The parties to reserve coordination transactions pursuant to this section shall maintain such amounts of operating reserves as may be adequate to avoid the imposition of unreasonable demands on any other party(ies) in meeting the normal contingencies of operating their systems. However, in no circumstances shall a party's operating reserve requirement exceed its minimum reserve margin.

(d) Licensee, if it has generating capacity in excess of the amount called for by its own reserve criteria, will offer, on terms which enable licensee to recover its costs, any such excess to a neighboring entity to meet such entity's own minimum reserve margin.

(e) Licensee shall prepare with neighboring entities who request to do so, joint maintenance schedules and shall engage in sales of maintenance power and energy when it can reasonably do so.

(f) Licensee shall file the agreements for such coordination with the Federal Power Commission, and that agency shall have jurisdiction over the rates and charges contained in such agreements.

IV. Other Power Exchanges

Licensee currently has on file, and may hereafter file, with the Federal Power Commission interconnection agreements with neighboring entities providing for the sale and purchase of short-term capacity and energy, limited-term capacity and energy, long-term capacity and energy, economy energy, and other forms of capacity and energy. Licensee will, on a fair and equitable basis, enter into an interconnection agreement with any neighboring entity providing for the same or like capacity and energy transactions. In order to facilitate the making of such transactions, licensee will respond promptly to inquiries of neighboring entities concerning the availability of all such forms of capacity and energy from its system. Licensee shall file the agreements providing for such sales of capacity and energy with the Federal Power Commission, and that agency shall have jurisdiction over the rates and charges contained in such agreements. Nothing herein shall be construed to require licensee to enter into a fixed rate interconnection agreement.

V. Wholesale Power Sales

Licensee will sell power on a full or partial requirements basis to any neighboring distribution system at rates which fully compensate licensee for its costs. Wholesale power sales agreements shall not

restrict use or resale of power sold pursuant to such agreements except as may be necessary to protect the reliability of licensee's system. Such power will not be delivered at lower voltages when higher voltages are requested and available. Licensee shall not be required to make any such sale if it does not have available sufficient generation or transmission to provide the requested service or if the sale would impair its ability to render adequate and reliable service to its current customers. Licensee shall file the agreements providing for such sales with the Federal Power Commission, and that agency shall have jurisdiction over the rates and charges contained in such agreements.

VI. Transmission Services

(a) Licensee will provide transmission service for bulk power transactions (1) between two or among more than two neighboring entities in the applicable area with whom, now or in the future, it is interconnected, (2) between a neighboring entity with whom, now or in the future, it is interconnected and a neighboring distribution system(s) with whom, now or in the future, it is connected, and (3) between any neighboring entity or neighboring distribution system(s) and any other electric system engaging in bulk power supply outside the applicable area between whose facilities licensee's transmission lines and the transmission lines of other electric systems form a continuous electrical path, provided that (i) permission to utilize such transmission lines of other electric systems has been obtained by the proponent of the arrangement, and (ii) the arrangements can be reasonably accommodated from a technical standpoint.

Any neighboring entity or neighboring distribution system requesting such transmission service shall give reasonable advance notice to licensee of its schedule and requirements. Licensee shall not be required to provide transmission service if to do so would impair licensee's system reliability, it being recognized that while some transmission facilities may be operated fully loaded, other transmission facilities may be for emergency use and operated either unloaded or partially loaded.

Such transmission service shall be on terms that fully compensate licensee for its costs. Where a neighboring entity or neighboring distribution system has made a contribution in aid of construction pursuant to Section VI(b) below, the transmission rate for such entity or distribution system shall be adjusted accordingly to reflect licensee's reduced capital investment.

(b) Licensee shall include in its planning and construction programs such increases in the capacity of its existing or planned transmission facilities as may be required for the transactions referred to in paragraph (a) of this Section VI, provided any neighboring entity or neighboring distribution system gives licensee sufficient advance notice as may be necessary to accommodate its requirements from a technical standpoint. This section shall not be construed to require licensee to construct new transmission lines for the sole benefit of a neighboring entity or neighboring distribution system. Licensee shall not be required to increase the transmission capacity of its existing or planned transmission facilities if to do so would impair its system reliability or if the neighboring entity or neighboring distribution system requesting the construction of increased transmission capacity fails to make a nonrefundable contribution in aid of construction to licensee equal to the difference between the estimated cost of the transmission facilities licensee would construct for its own use and the estimated cost of the transmission facilities licensee would construct for the use of itself and the neighboring entity or neighboring distribution systems within a reasonable time prior to the construction of the facilities.

(c) Licensee shall file the agreements providing for such transmission services with the Federal Power Commission, and that agency shall have jurisdiction over the rates and charges for such services.

VII. Access to Nuclear Generation

(a) Licensee will afford any neighboring entity or neighboring distribution system that has made a request prior to January 1, 1975, an opportunity to participate in the ownership of Marble Hill Nuclear Generating Station, Units 1 and 2, up to a reasonable amount in kilowatts. This participation shall be on a basis that will fully compensate licensee for its costs incurred and to be incurred. Licensee shall provide promptly any requesting entity with sufficient financial data to enable such entity to make a feasibility study as to its participation.

(b) Licensee will afford any neighboring entity or neighboring distribution system that makes a timely request an opportunity to participate in the ownership of or to purchase a portion of the output, whichever the requesting party elects, from any other nuclear generating unit of licensee up to a reasonable amount in kilowatts. Licensee shall mail to all nonaffiliated adjacent

electric utility systems, no later than the date of its public announcement of the proposed construction of any such unit(s), sufficient financial data to enable an electric utility system to make a feasibility study as to its participation and shall promptly furnish such information to any other entity or distribution system which requests such information. A request for participation with respect to such nuclear units shall be deemed timely if made within 180 days after the public announcement by licensee of the proposed construction of such units.

(c) As to participation in the Marble Hill nuclear units, any neighboring entity or neighboring distribution system making a timely request for participation must enter into a legally binding and enforceable agreement by December 1, 1975. As to any other nuclear unit licensee may construct, any neighboring entity or neighboring distribution system making a timely request for participation must enter into a legally binding and enforceable agreement within one year after licensee's public announcement of the proposed construction of such unit(s). In the event licensee fails to provide sufficient financial data to a requesting entity as required in Section VII(b) above, the time period within which that requesting entity must enter into a legally binding and enforceable agreement shall be extended for a period equal to the time which elapses between the date on which such data is requested and the date sufficient financial data is in fact furnished.

(d) Licensee may require the inclusion in any agreement provided for in Section VII(c) above of provisions for (1) payment at the time of the signing of the agreement of not more than 10 percent of the estimated cost of participation in any such generating units and associated transmission facilities, and (2) additional pro rata payments thereafter as licensee becomes obligated to expend funds for the planning or construction of said units and facilities. Any funds received by licensee in advance of an actual expenditure shall be held in escrow until they are needed to reimburse licensee. All interest earned on the escrow account shall inure to the benefit of the party(ies) who advanced the funds. In the event any participant fails to meet fully its financial commitment with respect to a nuclear unit, such participant shall only be entitled to participate in that nuclear unit in an amount equal to the relationship its total payments up to that point bear to licensee's total investment in the facility.

(e) Licensee shall transmit power from the Marble Hill units or any future nuclear unit it may own or operate to any neighboring entity or neighboring distribution system which is a participant in that unit, in accord with the requirements of Section VI of these commitments.

VIII. Interpretation with Other Laws

The foregoing commitments are to be implemented and applied in a manner consistent with Federal, State, and local laws, judicial decisions, regulations, and orders, and nothing contained herein shall be deemed to authorize or require any violation of such laws, regulations, decisions or orders. All rates, charges, conditions, terms and practices are and will be subject to the acceptance and/or approval of any regulatory agencies or courts having jurisdiction over them.

IX. General

(a) This statement of commitments is not intended to affect in any way the franchises, certificates of public convenience and necessity, or other rights of licensee or of any neighboring entity or of any neighboring distribution system to render electric service in the State of Indiana.

(b) Nothing herein shall be construed as a waiver by licensee of its right to contest whether or not and the extent to which a particular factual situation may be covered by this statement of commitments or preclude the licensee from contesting an alleged act of unfair competition.

(c) Licensee does not intend by this statement of commitments to become a common carrier.

(d) Licensee recognizes that the carrying out of some of the commitments expressed herein in particular circumstances may not be in the mutual interest of the licensee and a neighboring entity or neighboring distribution system. Nothing herein is intended to preclude licensee and a neighboring entity or neighboring distribution system from reaching an agreement which extends, varies, or supplements the provisions of the foregoing paragraphs in a manner not inconsistent with the broad principles expressed herein.

(e) The foregoing is intended to be a complete statement of licensee's [antitrust] commitments.

F. This permit is subject to the following conditions for the protection of the environment:

- (1) The applicants shall take the necessary mitigating actions, including those summarized in Section 4.5 of the Final Environmental Statement, during construction of the station, and associated transmission lines to avoid unnecessary adverse environmental impacts from construction activities.
- (2) In addition to the preoperational monitoring program described in Section 6.1 of the Environmental Report, with amendments, the staff recommendations in Section 6.1 of the Final Environmental Statement shall be followed.
- (3) Responsible applicants' staff shall be assigned to promote car pooling and to provide essential information points or other feasible means to assist construction workers in forming car pools. Such applicants' staff shall be responsible for ongoing management of applicants' car pooling efforts. Responsible applicants' staff shall also undertake an investigation of the potential demand for bus service between the construction site and the Louisville, Kentucky, metropolitan area, and shall assist in promoting and in arranging such service if there is sufficient demand. Investigation of the demand for bus service shall be commenced by the applicants when onsite construction labor reaches several hundred; reevaluation of potential demand shall occur every six months thereafter, until the close of construction. Finally, records of applicants' evaluations of demand for bus service and any arrangement for providing such service shall be maintained in a manner which is consistent with Condition (4) below.
- (4) The applicants shall establish a control program which shall include written procedures and instructions to control all construction activities as prescribed herein and shall provide for periodic management audits to determine the adequacy of implementation of environmental conditions. The applicants shall maintain sufficient records to furnish evidence of compliance with all the environmental conditions.
- (5) Before engaging in a construction activity not evaluated by the Commission, the applicants will prepare and record an environmental evaluation of such activity. When the

evaluation indicates that such activity may result in a significant adverse environmental impact that was not evaluated in the Final Environmental Statement, the applicants shall provide a written evaluation of such activities and obtain prior approval of the Director of Nuclear Reactor Regulation for the activities.

- (6) If unexpected harmful effects or evidence of irreversible damage are detected during facility construction, the applicants shall provide to the staff an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.

G. This permit is also subject to the following conditions properly imposed by the Stream Pollution Control Board of the State of Indiana in the certification pursuant to Section 401 of the Federal Water Pollution Control Act Amendments of 1972:

- (1) All final plans for each phase of construction shall be submitted and approved by the Indiana Stream Pollution Control Board before that phase of construction commences.
- (2) The applicants shall make application for an NPDES discharge permit at least 180 days prior to commencement of the discharge. This condition applies to the discharges due to construction runoff and plant operation.
- (3) The applicants shall be prepared to submit proper studies under Section 316(a) and (b) as required by Sections 301 and 306 of the Federal Water Pollution Control Act Amendments of 1972.
- (4) The applicants shall obtain all necessary construction and operation permits from all Federal and State agencies requiring such permits.
- (5) The chlorine content of the discharge shall not exceed 0.2 milligrams per liter when measured as total residual. The applicants may request increased total chlorine residual limitations if supported by a bioassay study acceptable to the Indiana Stream Pollution Control Board.
- (6) The temperature of the discharge is limited as specified in Regulation SPC IR-3. Alternative thermal limitations may be requested in accordance with Section 316(a) of the Federal Water Pollution Control Act Amendments of 1972.

- H. In accordance with the requirements imposed by the October 8, 1976 Order of the United States Court of Appeals for the District of Columbia Circuit in Natural Resources Defense Council v. Nuclear Regulatory Commission, 547 F2d 633 (reversed and remanded, sup nom. Vermont Yankee Nuclear Power Corporation v. Natural Resources Defense Council, Inc. (April 3, 1978)), that the Nuclear Regulatory Commission "shall make any licenses granted between July 21, 1976, and such time when the mandate is issued subject to the outcome of such proceedings herein," the construction permit issued herein shall be subject to the outcome of such proceedings.
4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the applicants submit to the Commission 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; (c) the Commission finds that operation of the facility will be in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements are satisfied; and (d) the applicants submit proof of financial protection and execute an indemnity agreement as required by Section 170 of the Act.
5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

FOR THE NUCLEAR REGULATORY COMMISSION

Signed by
Roger S. Boyd

Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance:

APR 4 1978



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

PUBLIC SERVICE COMPANY OF INDIANA, INC.

WABASH VALLEY POWER ASSOCIATION, INC.

DOCKET NO. STN 50-547

MARBLE HILL NUCLEAR GENERATING STATION, UNIT 2

CONSTRUCTION PERMIT

Construction Permit No. CPPR-171

1. The Nuclear Regulatory Commission (the Commission) having found that:
 - A. The application for construction permits complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission; there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission; and all required notifications to other agencies or bodies have been duly made;
 - B. Public Service Company of Indiana, Inc. and Wabash Valley Power Association, Inc. (the applicants) have described the proposed design of the Marble Hill Nuclear Generating Station, Unit 2 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design, and have identified the major features or components incorporated therein for the protection of the health and safety of the public;
 - C. 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;
 - D. Safety features or components, if any, which require research and development have been described by the applicants and the applicants have identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

- E. 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;
 - F. Public Service Company of Indiana, Inc. is technically qualified to design and construct the proposed facility on behalf of itself and the co-applicant, Wabash Valley Power Association, Inc.;
 - G. The applicants are financially qualified to design and construct the proposed facility. However, the applicants are required to inform the Commission if the U.S. Rural Electrification Administration ever attempts to take any action, under color of authority under the loan contract, which the applicants deem to be at variance either with Public Service Company of Indiana's technical judgment or any Commission regulations or requirements.
 - H. 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; and
 - I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 (formerly Appendix D to 10 CFR Part 50) of the Commission's regulations and all applicable requirements have been satisfied.
2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities", and pursuant to the Partial Initial Decision, dated August 22, 1977, the Partial Initial Decision, dated December 9, 1977, and the Initial Decision dated April 4, 1978, issued by the Atomic Safety and Licensing Board, the Nuclear Regulatory Commission hereby issues a construction permit to the applicants for a utilization facility designed to operate at 3411 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the applicants and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Marble Hill Nuclear Generating Station, Unit 2, will be located on the applicants' site in Saluda Township, Jefferson County, Indiana.

3. This permit shall be deemed to contain and be subject to the conditions specified in Section 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 January 1, 1984, and the latest date for completion is January 1, 1986.
 - B. The facility shall be constructed and located at the site as described in the application, in Saluda Township, Jefferson County, Indiana.
 - C. This construction permit authorizes the applicants to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and commitments set forth therein.
 - D. Pursuant to the agreement on the concerns of the Louisville Water Company (LWC), dated August 15, 1977, this permit includes the following seven conditions:
 - a. The requirements for the Marble Hill preoperational radiological monitoring program are outlined in the NRC Staff's Final Environmental Statement (FES) Section 6.1.2 (including Table 6.1). The FES requires that the closest LWC water intake and Louisville drinking water be monitored as indicated and in accordance with current and future requirements of NRC Regulatory Guide 4.8. The applicants agree to commence the LWC water intake and Louisville drinking water aspects of the preoperational radiological monitoring program two years prior to operation of the Marble Hill facility. The applicants and the NRC staff agree that such monitoring shall be required to be continued as part of the operational monitoring program. The monitoring shall comply with all applicable current or future NRC Regulatory Guides, Federal regulations and environmental technical specifications throughout the operation of the Marble Hill facility.
 - b. The closest LWC water intake shall be designated by the LWC and agreed to by the applicants and approved by the NRC staff at the time for implementation of the preoperational radiological monitoring program.

- c. LWC shall have access to all monitoring conducted by the applicants at its water intake and shall be furnished with copies of all test results and all reports of monitoring and test results furnished by the applicants to the NRC.
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 - e. The applicants agree to provide LWC with the unlisted number of the shift supervisor of the Marble Hill facility.
 - f. The applicants will include provisions in their Emergency Plan requiring direct early notification to LWC in the event of any emergency situation.
 - g. As used herein (paragraph 3.D. of this permit), the term applicants shall mean the party or parties determined by a final order (not subject to further Commission or judicial review) to be solely or jointly responsible for carrying out the obligations of this agreement.
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(c) "Licensee" means Public Service Company of Indiana, Inc., any successor corporation, or any assignee of this applicant.

(d) "Neighboring entity" means a financially responsible private or public corporation, governmental agency or authority, municipality, rural electric membership corporation or cooperative, person, or lawful association of any of the foregoing, which owns, controls or operates or in good faith proposes to own, control, or operate facilities for the generation of electricity, which meets each of the following criteria: (1) its existing or proposed facilities are technically feasible of interconnection with those

of licensee; (2) its existing or proposed facilities are fully or partially within the applicable area; (3) it is, or upon commencement of operations will be, subject to regulation with respect to rates and/or service under the laws of the State of Indiana or any other State in which licensee may serve, or under the Federal Power Act, or it is legally exempted from such regulation; and (4) it is authorized to transact business and operate as a public utility under the laws of the State of Indiana or any other State in which licensee may serve, or it is not legally required to obtain such authority.

(e) "Neighboring distribution system" means a financially responsible private or public corporation, governmental agency or authority, municipality, rural electric membership corporation or cooperative, person, or lawful association of any of the foregoing, which engages or in good faith proposes to engage in the distribution of electric energy at retail, whose existing or proposed facilities are technically feasible of connection with those of licensee, and which meets each of the criteria numbered (2) through (4) in subparagraph (d) above.

(f) "Cost" means any administrative, general, operation and maintenance expenses, taxes, capital costs and a fair and reasonable return on licensee's investment, which are properly allocable to the particular service or transaction and the facilities involved in the transaction.

II. Interconnections

(a) Licensee will enter into written agreements to interconnect and operate in parallel with any neighboring entity.

(b) Interconnection agreements will not be limited to lower voltages when higher voltages are requested and available.

(c) Interconnection agreements shall provide for the necessary operating procedures and control equipment as required for safe and prudent operation of the interconnected systems.

(d) The cost of interconnection will be mutually negotiated and shared on the basis of benefits derived from the interconnection by each party after consideration of the various transactions for which the interconnection facilities are to be utilized.

(e) Interconnection agreements will not embody provisions which impose limitations upon the use or resale of capacity and energy sold or exchanged pursuant to the agreement except as may be necessary to protect the reliability of licensee's system.

(f) Interconnection agreements will not prohibit the parties from entering into other interconnections or coordination agreements, but may include appropriate provisions to assure that (1) licensee receives sufficient notice of such additional interconnection or coordination to protect the reliability of its system, (2) the parties jointly consider and mutually agree upon such measures, if any, as are reasonably necessary for safety and for the protection of the reliability of licensee's system, and (3) licensee is fully compensated for any additional costs incurred or expenditures made resulting from such other interconnections or coordination agreements.

III. Reserve Coordination

(a) Licensee and its neighboring entities with which it interconnects shall jointly establish and mutually agree in writing upon a level of minimum reserves to be installed or provided as necessary to maintain a total reserve margin sufficient, as determined by probability calculations and prudent engineering judgment, to provide adequate reliability of power supply to the interconnected systems. The reserve responsibility thus determined shall be calculated as a percentage of the estimated annual peak load (adjusted to exclude purchases of firm power) of the interconnected systems. No party to the interconnection shall be required to install or provide more than such percentage as its minimum reserve margin. No party to the interconnection shall be required to provide reserve capacity for that portion of its estimated annual peak load which is met through firm power purchases.

(b) Licensee will sell emergency power to any neighboring entity which maintains the minimum reserve margin established pursuant to paragraph (a) above. Licensee shall engage in such transactions if and when capacity and energy are available for such transactions from its own generating resources or from those of interconnected electric systems, but only to the extent that it can do so without impairing service to its customers. Emergency power shall be furnished to the fullest extent available from the supplying party and desired by the party in need and at rates which compensate licensee for its cost.

(c) The parties to reserve coordination transactions pursuant to this section shall maintain such amounts of operating reserves as may be adequate to avoid the imposition of unreasonable demands on any other party(ies) in meeting the normal contingencies of operating their systems. However, in no circumstances shall a party's operating reserve requirement exceed its minimum reserve margin.

(d) Licensee, if it has generating capacity in excess of the amount called for by its own reserve criteria, will offer, on terms which enable licensee to recover its costs, any such excess to a neighboring entity to meet such entity's own minimum reserve margin.

(e) Licensee shall prepare with neighboring entities who request to do so, joint maintenance schedules and shall engage in sales of maintenance power and energy when it can reasonably do so.

(f) Licensee shall file the agreements for such coordination with the Federal Power Commission, and that agency shall have jurisdiction over the rates and charges contained in such agreements.

IV. Other Power Exchanges

Licensee currently has on file, and may hereafter file, with the Federal Power Commission interconnection agreements with neighboring entities providing for the sale and purchase of short-term capacity and energy, limited-term capacity and energy, long-term capacity and energy, economy energy, and other forms of capacity and energy. Licensee will, on a fair and equitable basis, enter into an interconnection agreement with any neighboring entity providing for the same or like capacity and energy transactions. In order to facilitate the making of such transactions, licensee will respond promptly to inquiries of neighboring entities concerning the availability of all such forms of capacity and energy from its system. Licensee shall file the agreements providing for such sales of capacity and energy with the Federal Power Commission, and that agency shall have jurisdiction over the rates and charges contained in such agreements. Nothing herein shall be construed to require licensee to enter into a fixed rate interconnection agreement.

V. Wholesale Power Sales

Licensee will sell power on a full or partial requirements basis to any neighboring distribution system at rates which fully compensate licensee for its costs. Wholesale power sales agreements shall not

restrict use or resale of power sold pursuant to such agreements except as may be necessary to protect the reliability of licensee's system. Such power will not be delivered at lower voltages when higher voltages are requested and available. Licensee shall not be required to make any such sale if it does not have available sufficient generation or transmission to provide the requested service or if the sale would impair its ability to render adequate and reliable service to its current customers. Licensee shall file the agreements providing for such sales with the Federal Power Commission, and that agency shall have jurisdiction over the rates and charges contained in such agreements.

VI. Transmission Services

(a) Licensee will provide transmission service for bulk power transactions (1) between two or among more than two neighboring entities in the applicable area with whom, now or in the future, it is interconnected, (2) between a neighboring entity with whom, now or in the future, it is interconnected and a neighboring distribution system(s) with whom, now or in the future, it is connected, and (3) between any neighboring entity or neighboring distribution system(s) and any other electric system engaging in bulk power supply outside the applicable area between whose facilities licensee's transmission lines and the transmission lines of other electric systems form a continuous electrical path, provided that (i) permission to utilize such transmission lines of other electric systems has been obtained by the proponent of the arrangement, and (ii) the arrangements can be reasonably accommodated from a technical standpoint.

Any neighboring entity or neighboring distribution system requesting such transmission service shall give reasonable advance notice to licensee of its schedule and requirements. Licensee shall not be required to provide transmission service if to do so would impair licensee's system reliability, it being recognized that while some transmission facilities may be operated fully loaded, other transmission facilities may be for emergency use and operated either unloaded or partially loaded.

Such transmission service shall be on terms that fully compensate licensee for its costs. Where a neighboring entity or neighboring distribution system has made a contribution in aid of construction pursuant to Section VI(b) below, the transmission rate for such entity or distribution system shall be adjusted accordingly to reflect licensee's reduced capital investment.

(b) Licensee shall include in its planning and construction programs such increases in the capacity of its existing or planned transmission facilities as may be required for the transactions referred to in paragraph (a) of this Section VI, provided any neighboring entity or neighboring distribution system gives licensee sufficient advance notice as may be necessary to accommodate its requirements from a technical standpoint. This section shall not be construed to require licensee to construct new transmission lines for the sole benefit of a neighboring entity or neighboring distribution system. Licensee shall not be required to increase the transmission capacity of its existing or planned transmission facilities if to do so would impair its system reliability or if the neighboring entity or neighboring distribution system requesting the construction of increased transmission capacity fails to make a nonrefundable contribution in aid of construction to licensee equal to the difference between the estimated cost of the transmission facilities licensee would construct for its own use and the estimated cost of the transmission facilities licensee would construct for the use of itself and the neighboring entity or neighboring distribution systems within a reasonable time prior to the construction of the facilities.

(c) Licensee shall file the agreements providing for such transmission services with the Federal Power Commission, and that agency shall have jurisdiction over the rates and charges for such services.

VII. Access to Nuclear Generation

(a) Licensee will afford any neighboring entity or neighboring distribution system that has made a request prior to January 1, 1975, an opportunity to participate in the ownership of Marble Hill Nuclear Generating Station, Units 1 and 2, up to a reasonable amount in kilowatts. This participation shall be on a basis that will fully compensate licensee for its costs incurred and to be incurred. Licensee shall provide promptly any requesting entity with sufficient financial data to enable such entity to make a feasibility study as to its participation.

(b) Licensee will afford any neighboring entity or neighboring distribution system that makes a timely request an opportunity to participate in the ownership of or to purchase a portion of the output, whichever the requesting party elects, from any other nuclear generating unit of licensee up to a reasonable amount in kilowatts. Licensee shall mail to all nonaffiliated adjacent

electric utility systems, no later than the date of its public announcement of the proposed construction of any such unit(s), sufficient financial data to enable an electric utility system to make a feasibility study as to its participation and shall promptly furnish such information to any other entity or distribution system which requests such information. A request for participation with respect to such nuclear units shall be deemed timely if made within 180 days after the public announcement by licensee of the proposed construction of such units.

(c) As to participation in the Marble Hill nuclear units, any neighboring entity or neighboring distribution system making a timely request for participation must enter into a legally binding and enforceable agreement by December 1, 1975. As to any other nuclear unit licensee may construct, any neighboring entity or neighboring distribution system making a timely request for participation must enter into a legally binding and enforceable agreement within one year after licensee's public announcement of the proposed construction of such unit(s). In the event licensee fails to provide sufficient financial data to a requesting entity as required in Section VII(b) above, the time period within which that requesting entity must enter into a legally binding and enforceable agreement shall be extended for a period equal to the time which elapses between the date on which such data is requested and the date sufficient financial data is in fact furnished.

(d) Licensee may require the inclusion in any agreement provided for in Section VII(c) above of provisions for (1) payment at the time of the signing of the agreement of not more than 10 percent of the estimated cost of participation in any such generating units and associated transmission facilities, and (2) additional pro rata payments thereafter as licensee becomes obligated to expend funds for the planning or construction of said units and facilities. Any funds received by licensee in advance of an actual expenditure shall be held in escrow until they are needed to reimburse licensee. All interest earned on the escrow account shall inure to the benefit of the party(ies) who advanced the funds. In the event any participant fails to meet fully its financial commitment with respect to a nuclear unit, such participant shall only be entitled to participate in that nuclear unit in an amount equal to the relationship its total payments up to that point bear to licensee's total investment in the facility.

(e) Licensee shall transmit power from the Marble Hill units or any future nuclear unit it may own or operate to any neighboring entity or neighboring distribution system which is a participant in that unit, in accord with the requirements of Section VI of these commitments.

VIII. Interpretation with Other Laws

The foregoing commitments are to be implemented and applied in a manner consistent with Federal, State, and local laws, judicial decisions, regulations, and orders, and nothing contained herein shall be deemed to authorize or require any violation of such laws, regulations, decisions or orders. All rates, charges, conditions, terms and practices are and will be subject to the acceptance and/or approval of any regulatory agencies or courts having jurisdiction over them.

IX. General

(a) This statement of commitments is not intended to affect in any way the franchises, certificates of public convenience and necessity, or other rights of licensee or of any neighboring entity or of any neighboring distribution system to render electric service in the State of Indiana.

(b) Nothing herein shall be construed as a waiver by licensee of its right to contest whether or not and the extent to which a particular factual situation may be covered by this statement of commitments or preclude the licensee from contesting an alleged act of unfair competition.

(c) Licensee does not intend by this statement of commitments to become a common carrier.

(d) Licensee recognizes that the carrying out of some of the commitments expressed herein in particular circumstances may not be in the mutual interest of the licensee and a neighboring entity or neighboring distribution system. Nothing herein is intended to preclude licensee and a neighboring entity or neighboring distribution system from reaching an agreement which extends, varies, or supplements the provisions of the foregoing paragraphs in a manner not inconsistent with the broad principles expressed herein.

(e) The foregoing is intended to be a complete statement of licensee's [antitrust] commitments.

F. This permit is subject to the following conditions for the protection of the environment:

- (1) The applicants shall take the necessary mitigating actions, including those summarized in Section 4.5 of the Final Environmental Statement, during construction of the station, and associated transmission lines to avoid unnecessary adverse environmental impacts from construction activities.
- (2) In addition to the preoperational monitoring program described in Section 6.1 of the Environmental Report, with amendments, the staff recommendations in Section 6.1 of the Final Environmental Statement shall be followed.
- (3) Responsible applicants' staff shall be assigned to promote car pooling and to provide essential information points or other feasible means to assist construction workers in forming car pools. Such applicants' staff shall be responsible for ongoing management of applicants' car pooling efforts. Responsible applicants' staff shall also undertake an investigation of the potential demand for bus service between the construction site and the Louisville, Kentucky, metropolitan area, and shall assist in promoting and in arranging such service if there is sufficient demand. Investigation of the demand for bus service shall be commenced by the applicants when onsite construction labor reaches several hundred; reevaluation of potential demand shall occur every six months thereafter, until the close of construction. Finally, records of applicants' evaluations of demand for bus service and any arrangement for providing such service shall be maintained in a manner which is consistent with Condition (4) below.
- (4) The applicants shall establish a control program which shall include written procedures and instructions to control all construction activities as prescribed herein and shall provide for periodic management audits to determine the adequacy of implementation of environmental conditions. The applicants shall maintain sufficient records to furnish evidence of compliance with all the environmental conditions.
- (5) Before engaging in a construction activity not evaluated by the Commission, the applicants will prepare and record an environmental evaluation of such activity. When the

evaluation indicates that such activity may result in a significant adverse environmental impact that was not evaluated in the Final Environmental Statement, the applicants shall provide a written evaluation of such activities and obtain prior approval of the Director of Nuclear Reactor Regulation for the activities.

- (6) If unexpected harmful effects or evidence of irreversible damage are detected during facility construction, the applicants shall provide to the staff an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.

G. This permit is also subject to the following conditions properly imposed by the Stream Pollution Control Board of the State of Indiana in the certification pursuant to Section 401 of the Federal Water Pollution Control Act Amendments of 1972:

- (1) All final plans for each phase of construction shall be submitted and approved by the Indiana Stream Pollution Control Board before that phase of construction commences.
- (2) The applicants shall make application for an NPDES discharge permit at least 180 days prior to commencement of the discharge. This condition applies to the discharges due to construction runoff and plant operation.
- (3) The applicants shall be prepared to submit proper studies under Section 316(a) and (b) as required by Sections 301 and 306 of the Federal Water Pollution Control Act Amendments of 1972.
- (4) The applicants shall obtain all necessary construction and operation permits from all Federal and State agencies requiring such permits.
- (5) The chlorine content of the discharge shall not exceed 0.2 milligrams per liter when measured as total residual. The applicants may request increased total chlorine residual limitations if supported by a bioassay study acceptable to the Indiana Stream Pollution Control Board.
- (6) The temperature of the discharge is limited as specified in Regulation SPC IR-3. Alternative thermal limitations may be requested in accordance with Section 316(a) of the Federal Water Pollution Control Act Amendments of 1972.

- H. In accordance with the requirements imposed by the October 8, 1976 Order of the United States Court of Appeals for the District of Columbia Circuit in Natural Resources Defense Council v. Nuclear Regulatory Commission, 547 F2d 633 (reversed and remanded, sub nom. Vermont Yankee Nuclear Power Corporation v. Natural Resources Defense Council, Inc. (April 3, 1978), that the Nuclear Regulatory Commission "shall make any licenses granted between July 21, 1976, and such time when the mandate is issued subject to the outcome of such proceedings herein," the construction permit issued herein shall be subject to the outcome of such proceedings.
4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the applicants submit to the Commission 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; (c) the Commission finds that operation of the facility will be in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements are satisfied; and (d) the applicants submit proof of financial protection and execute an indemnity agreement as required by Section 170 of the Act.
5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by
Roger S. Boyd

Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance:

APR 4 1978