

OFFICE	SURNAME	DATE
LWR 2-2	MSEWICE	6/16/74
LWR 2-2	L. Croker	6/16/74
LWR 2-2	Kniel	6/17/74
OGC	Pseiffert	6/17/74
OGC	Frutberg	6/17/74
EP	Muller	6/17/74

LB

ccs: See page 2

- 1. Construction Permits
- 2. Federal Register Notice

Enclosures:

Original signed by
 K. Kniel
 Rari Kniel, Chief
 Light Water Reactors Branch 2-2
 Directorate of Licensing

Sincerely,

The construction permits authorize Georgia Power Company to construct the Alvin W. Vogtle Nuclear Plant, Units 1, 2, 3, and 4. The plant, utilizing pressurized water nuclear reactors, will be located on the Savannah River in Burke County, Georgia.

Construction permits nos. CPR-108, CPR-109, CPR-110, and CPR-111 are enclosed, together with a copy of a related notice which has been forwarded to the Office of the Federal Register for publication.

Gentlemen:

Georgia Power Company
 ATTN: Mr. I. S. Mitchell, III
 Vice President & Secretary
 P. O. Box 4545
 Atlanta, Georgia 30302

50-427
 50-426
 50-425
 50-424

Docket Nos. 50-424

JUN 28 1974

ccs:

Mr. Ruble A. Thomas
 Vice President
 Southern Services, Inc.
 P.O. Box 2625
 Birmingham, Alabama 35202

George P. Trowbridge, Esq.
 Shaw, Pittman, Potts & Trowbridge
 910 17th Street, N. W.
 Washington, D. C. 20006

Mr. John Robins
 Office of Planning and Budget
 Room 615-C
 270 Washington Street, S. W.
 Atlanta, Georgia 30334

Mr. Hans L. Hamster
 Attn: Joan Sause
 Office of Radiation Programs
 Environmental Protection Agency
 401 M Street, S. W.
 Washington, D. C. 20460

Mr. Shepard N. Moore
 Environmental Protection Agency
 1421 Peachtree Street, N. E.
 Atlanta, Georgia 30309

Office of County Commissioner
 Burke County Commission
 Waynesboro, Georgia 30830

Librarian
 Georgia Institute of Technology
 Atlanta, Georgia 30332

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GEORGIA POWER COMPANY

DOCKET NO. 50-425

ALVIN W. VOGTLE NUCLEAR PLANT, UNIT 2

CONSTRUCTION PERMIT

Construction Permit No. CPPR-109

1. The Atomic Energy Commission (the Commission) having found that:
 - A. The application for construction permit 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. The Georgia Power Company (the applicant) has described the proposed design of the Alvin W. Vogtle Nuclear Plant, Unit 2 (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;
 - 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 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;
 - 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. The applicant is technically qualified to design and construct the proposed facility;
 - G. The applicant is financially qualified to design and construct the proposed facility;
 - 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 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 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D 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 Initial Decisions of the Atomic Safety and Licensing Board dated May 24, 1974, and June 27, 1974, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the applicant 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 applicant and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Alvin W. Vogtle Nuclear Plant, Unit 2, will be located on the applicant's site in Burke County, Georgia.
3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 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 October 1980, and the latest date for completion is April 1982.
 - B. The facility shall be constructed and located at the site as described in the application, in Burke County, Georgia.
 - 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 and environmental protection commitments set forth therein.

D. Antitrust conditions as follows:

(1) As used herein:

- (a) "Entity" means any financially responsible person, private or public corporation, municipality, county, cooperative, association, joint stock association or business trust, owning, operating or proposing to own or operate equipment or facilities within the State of Georgia (other than Chatham, Effingham, Fannin, Towns and Union Counties) for the generation, transmission or distribution of electricity, provided that, except for municipalities, counties, or rural electric cooperatives, "entity" is restricted to those which are or will be public utilities under the laws of the State of Georgia or under the laws of the United States, and are or will be providing retail electric service under a contract or rate schedule on file with and subject to the regulation of the Public Service Commission of the State of Georgia or any regulatory agency of the United States, and, provided further, that as to municipalities, counties or rural electric cooperatives, "entity" is restricted to those which provide electricity to the public at retail within the State of Georgia (other than Chatham, Effingham, Fannin, Towns and Union Counties) or to responsible and legally qualified organizations of such municipalities, counties and/or cooperatives in the State of Georgia (other than Chatham, Effingham, Fannin, Towns and Union Counties) to the extent they may bind their members.
- (b) "Applicant" means Georgia Power Company, any successor, assignee of this license, or assignee of all or substantially all of Georgia Power Company's assets, and any affiliate or subsidiary of Georgia Power Company to the extent it engages in the ownership of any bulk power supply generation or transmission resource in the State of Georgia (but specifically not including (1) flood rights and other land rights acquired in the State of Georgia incidental to hydroelectric generation facilities located in another state and (2) facilities located west of the thread of the stream on that part of the Chattahoochee River serving as the boundary between the States of Georgia and Alabama).

- (2) Applicant recognizes that it is often in the public interest for those engaging in bulk power supply and purchases to interconnect, coordinate for reliability and economy, and engage in bulk power supply transactions in order to increase

interconnected system reliability and reduce the costs of electric power. Such arrangements must provide for applicant's costs (including a reasonable return) in connection therewith and allow other participating entities full access to the benefits available from interconnected bulk power supply operations and must provide net benefits to applicant. In entering into such arrangements neither applicant nor any other participant should be required to violate the principles of sound engineering practice or forego a reasonably contemporaneous alternative arrangement with another, developed in good faith in arms length negotiations (but not including arrangements between applicant and its affiliates or subsidiaries which impair entities' rights hereunder more than they would be impaired were such arrangements made in good faith between applicant and a non-affiliate or non-subsidiary) which affords it greater benefits. Any such arrangement must provide for adequate notice and joint planning procedures consistent with sound engineering practice, and must relieve applicant from obligations undertaken by it in the event such procedures are not followed by any participating entity.

Applicant recognizes that each entity may acquire some or all of its bulk power supply from sources other than applicant.

In the implementation of the obligations stated in the succeeding paragraphs, applicant and entities shall act in accordance with the foregoing principles, and these principles are conditions to each of applicant's obligations herein undertaken.

- (3) Applicant shall interconnect with any entity which provides, or which has undertaken firm contractual obligations to provide, some or all of its bulk power supply from sources other than applicant on terms to be included in an interconnection agreement which shall provide for appropriate allocation of the costs of interconnection facilities; provided, however, that if an entity undertakes to negotiate such a firm contractual obligation, the applicant shall, in good faith, negotiate with such entity concerning any proposed interconnection. Such interconnection agreement shall provide, without undue preference or discrimination, for the following, among other things, insofar as consistent with the operating necessities of applicant's and any participating entity's systems:
 - (a) maintenance and coordination of reserves, including, where appropriate, the purchase and sale thereof,

- (b) emergency support,
- (c) maintenance support,
- (d) economy energy exchanges,
- (e) purchase and sale of firm and non-firm capacity and energy,
- (f) economic dispatch of power resources within the State of Georgia,

provided, however, that in no event shall such arrangements impose a higher percentage of reserve requirements on the participating entity than that maintained by applicant for similar resources.

- (4) Applicant shall sell full requirements power to any entity. Applicant shall sell partial requirements power to any entity. Such sales shall be made pursuant to rates on file with the Federal Power Commission, or any successor regulatory agency, and subject to reasonable terms and conditions.
- (5) (a) Applicant shall transmit ("transmission service") bulk power over its system to any entity or entities with which it is interconnected, pursuant to rate schedules on file with the Federal Power Commission which will fully compensate applicant for the use of its system, to the extent that such arrangements can be accommodated from a functional engineering standpoint and to the extent that applicant has surplus line capacity or reasonably available funds to finance new construction for this purpose. To the extent the entity or entities are able, they shall reciprocally provide transmission service to applicant. Transmission service will be provided under this subparagraph for the delivery of power to an entity for its or its members' consumption and retail distribution or for casual resale to another entity for (1) its consumption or (2) its retail distribution. Nothing contained herein shall require the applicant to transmit bulk power so as to have the effect of making the Tennessee Valley Authority ("TVA") or its distributors, directly or indirectly, a source of power supply outside the area determined by the TVA Board of Directors by resolution of May 16, 1966 to be the area for which the TVA or its distributors were the primary source

of power supply on July 1, 1957, the date specified in the Revenue Bond Act of 1959, 16 USC 831 n-4.

(b) Applicant shall transmit over its system from any entity or entities with which it is interconnected, pursuant to rate schedules on file with the Federal Power Commission which will fully compensate applicant for the use of its system, bulk power which results from any such entity having excess capacity available from self-owned generating resources in the State of Georgia, to the extent such excess necessarily results from economic unit sizing or from failure to forecast load accurately or from such generating resources becoming operational earlier than the planned in-service date, to the extent that such arrangements can be accommodated from a functional engineering standpoint, and to the extent applicant has surplus line capacity available.

(6) Upon request, applicant shall provide service to any entity purchasing partial requirements service, full requirements service or transmission service from applicant at a delivery voltage appropriate for loads served by such entity, commensurate with applicant's available transmission facilities. Sales of such service shall be made pursuant to rates on file with the Federal Power Commission or any successor regulatory agency, and subject to reasonable terms and conditions.

(7) Upon reasonable notice applicant shall grant any entity the opportunity to purchase an appropriate share in the ownership of, or, at the option of the entity, to purchase an appropriate share of unit power from, each of the following nuclear generating units at applicant's costs, to the extent the same are constructed and operated: Hatch 2, Vogtle 1, Vogtle 2, Vogtle 3, Vogtle 4, and any other nuclear generating unit constructed by applicant in the State of Georgia which, in the application filed with the USAEC or its successor agency, is scheduled for commercial operation prior to January 1, 1989.

An entity's request for a share must have regard for the economic size of such nuclear unit(s), for the entity's load size, growth and characteristics, and for demands upon applicant's system from other entities and applicant's retail customers, all in accordance with sound engineering practice. Executory agreements to accomplish the foregoing shall contain provisions

reasonably specified by applicant requiring the entity to consummate and pay for such purchase by an early date or dates certain. For purposes of this provision, "unit power" shall mean capacity and associated energy from a specified generating unit.

- (8) To effect the foregoing conditions, the following steps shall be taken:
- (a) Applicant shall file with the appropriate regulatory authorities and thereafter maintain in force as needed an appropriate transmission tariff available to any entity;
 - (b) Applicant shall file with the appropriate regulatory authorities and thereafter maintain in force as needed an appropriate partial requirements tariff available to any entity; applicant shall have its liability limited to the partial requirements service actually contracted for and the entity shall be made responsible for the security of the bulk power supply resources acquired by the entity from sources other than the applicant;
 - (c) Applicant shall amend the general terms and conditions of its current Federal Power Commission tariff and thereafter maintain in force as needed provisions to enable any entity to receive bulk power at transmission voltage at appropriate rates;
 - (d) Applicant shall not have the unilateral right to defeat the intended access by each entity to alternative sources of bulk power supply provided by the conditions to this license; but applicant shall retain the right to seek regulatory approval of changes in its tariffs to the end that it be adequately compensated for services it provides, specifically including, but not limited to, the provisions of Section 205 of the Federal Power Act;
 - (e) Applicant shall use its best efforts to amend any outstanding contract to which it is a party that contains provisions which are inconsistent with the conditions of this license;
 - (f) Applicant affirms that no consents are or will become necessary from applicant's parent, affiliates or subsidiaries to enable applicant to carry out its obligations hereunder or to enable the entities to enjoy their rights hereunder;

(g) All provisions of these conditions shall be subject to and implemented in accordance with the laws of the United States and of the State of Georgia, as applicable, and with rules, regulations and orders of agencies of both, as applicable.

E. This facility is subject to the following conditions for the protection of the environment:

- (1) The applicant shall take the necessary mitigating actions, including those applicant commitments 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) A control program shall be established by the applicant to provide for a periodic review of all construction activities to assure that those activities conform to the environmental conditions set forth in this permit;
- (3) Before engaging in a construction activity which may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement, the applicant shall provide written notification to the Director of Licensing.
- (4) If unexpected harmful effects or evidence of unexpected irreversible damage are detected during facility construction, the applicant shall provide an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.
- (5) The plant shall be designed such that:
 - (a) The plant discharge stream is continuously monitored for total residual chlorine concentration.
 - (b) The total residual chlorine concentration within 5 feet of the diffuser ports will be less than 0.1 ppm when all four units are in operation.
 - (c) All the cells in the intake structure will normally be used during operation of the intake pumps.

- (d) The diffuser design will be based on 6" diameter ports.
 - (6) The construction program and practices shall incorporate the following features:
 - (a) Rate of pumpage during dewatering will be low enough to prevent siltation in Beaverdam Creek.
 - (b) The Environmental Protection Agency guidelines (Water Quality Considerations for Construction and Dredging Operation, EPA, Southeast Region, April 1971) for the operation of retention basins will be followed in order to minimize the potential adverse effects on Beaverdam Creek as a result of erosion during construction.
 - (c) The retention basins will be drained between storms when the turbidity of the impounded water has decreased to acceptable levels.
 - (7) Prior to construction of the intake structure, the applicant shall submit the results of the aquatic monitoring programs and an evaluation of the environmental impact of the intake canal and intake structure which will satisfy the staff that impingement will not have a significant adverse effect on the adult population of resident and anadromous fish in the Savannah River.
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 applicant submits 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 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D were satisfied, and (d) the applicant submits proof of financial protection and the execution of 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 ATOMIC ENERGY COMMISSION

Karl R. Galloway / for

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Date of Issuance:

JUN 28 1974