

November 13, 1974

Elizabeth S. Bowers, Esq., Chairman
Atomic Safety and Licensing Board
U.S. Atomic Energy Commission
Washington, D.C. 20545

Mr. Glenn O. Bright
Atomic Safety and Licensing Board
U.S. Atomic Energy Commission
Washington, D.C. 20545

Dr. E. Leonard Cheatum, Director
Institute of National Resources
University of Georgia
Athens, Georgia 30601

In the Matter of Tennessee Valley Authority
(Bellefonte Nuclear Plant, Units 1 and 2)
Docket Nos. 50-438 and 50-439

Dear Members of the Board:

Enclosed are the Staff's "Proposed Partial Findings of Fact and Conclusions of Law Relating to Radiological Health and Safety Matters In the Form of a Proposed Initial Decision" and "Proposed Transcript Corrections".

Sincerely,

William D. Paton
Counsel for AEC Regulatory Staff

Enclosures (2)

cc w/enclosures:

Hugh K. Clark, Esq.
Dr. John H. Manley
Robert H. Marquis, Esq.
David G. Powell, Esq.
Mr. Aubrey V. Godwin
Atomic Safety and Licensing
Appeal Board
Atomic Safety and Licensing
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UNITED STATES OF AMERICA
 ATOMIC ENERGY COMMISSION

In the Matter of)	
)	
TENNESSEE VALLEY AUTHORITY)	Docket Nos. 50-438
)	50-439
(Bellefonte Nuclear Plant,)	
Units 1 and 2))	

AEC REGULATORY STAFF'S PROPOSED PARTIAL FINDINGS
 OF FACT AND CONCLUSIONS OF LAW RELATING TO
 RADIOLOGICAL HEALTH AND SAFETY MATTERS
 IN THE FORM OF A PROPOSED INITIAL DECISION

I. PRELIMINARY STATEMENT

I-1. This proceeding involves an application dated June 19, 1973, by the Tennessee Valley Authority (TVA) for construction permits authorizing construction of the Bellefonte Nuclear Plant, Units 1 and 2 (the facility or plant). The proposed plant, consisting of two pressurized water nuclear reactors is to be located in Jackson County, Alabama on a tract of land containing approximately 1500 acres on the west shore of Guntersville Reservoir about seven miles east-northeast of Scottsboro, Alabama, at Tennessee River Mile (TRM) 392. Each unit is designed for initial operation at approximately 3600 megawatts thermal, with a net electrical output of approximately 1200 megawatts.

I-2. On August 3, 1973, the Commission published a "Notice of Hearing on Application for Construction Permits" which, among other things, provided

an opportunity for persons whose interest may be affected by construction of the facility to file petitions with the Commission for leave to intervene in the proceeding (38 F.R. 20932-3). On August 10, 1973, the Commission published a Notice of Appointment of an Atomic Safety and Licensing Board to conduct the proceeding (38 F.R. 21683).

I-3. The Notice of Hearing set forth inter alia the determinations related to radiological health and safety issues which must be made by this Board.

They are:

1. Whether in accordance with the provisions of 10 CFR 50.35(a):

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

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

(c) Safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted a research and development program reasonably designed to resolve any safety questions associated with such features or components; and

(d) On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facilities, and

(ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facilities can be constructed and operated at the proposed location without undue risk to the health and safety of the public.

2. Whether the applicant is technically qualified to design and construct the proposed facilities;

3. Whether the applicant is financially qualified to design and construct the proposed facilities; and

4. Whether the issuance of permits for construction of the facilities will be inimical to the common defense and security or to the health and safety of the public."

I-4. On July 9, 10 and 11, 1974, in Scottsboro, Alabama, the Board conducted a public evidentiary hearing on issues involving site suitability and the National Environmental Policy Act of 1969 (NEPA).

I-5. On September 6, 1974, a "Partial Initial Decision on Environmental Matters and Site Suitability" was issued and that decision is incorporated herein by reference. The Board determined therein that the appropriate action to be taken, subject to making affirmative findings on radiological health and safety issues is issuance of construction permits for the proposed Bellefonte Nuclear Plant. On September 17, 1974, pursuant to 10 CFR § 50.10(e)(2), the AEC's Directorate of Licensing issued a Limited Work Authorization (LWA) authorizing the Applicant to commence certain on-site construction activities.

I-6. On September 26, 1974, the Board published a Notice of Health and Safety Hearing (39 F.R. 34598), scheduling a public evidentiary hearing on October 16, 1974 and on October 1, 1974, set the location of the hearing in Scottsboro, Alabama.

I-7. The Applicant and the AEC Regulatory Staff (Staff) were parties to the proceeding while the State of Alabama participated pursuant to the provisions of 10 CFR § 2.715(c). In addition, limited appearance statements were made at this hearing session by Dr. Thomas A. Gibson, Chairman of the Jackson County, Alabama, Board of Health (Tr.623); Robert Binnings of Harry Hendon and Associates of Birmingham, Alabama (Tr.626); and William E. Garner, Attorney, Scottsboro, Alabama (Tr.631). Counsel for the Applicant and Staff responded to these statements (Tr.643-646).

I-8. At the October 16, 1974 hearing session, the parties offered the following evidence which was presented to the Board in addition to the testimony adduced on the record. Applicant's Exhibit 5, "Preliminary Safety Analysis Report, Bellefonte Nuclear Plant" (PSAR) (Tr.666); Applicant's Exhibit 6, a document entitled "Information Pursuant to 10 CFR Section 50.33 of the Commission's Rules and Regulations" (Tr.666); Staff Exhibit 5, the "Safety Evaluation of the Bellefonte Nuclear Plant, Units 1 and 2" (SER) and Supplement No. 1 to the Safety Evaluation (Tr.677); Staff Exhibit 6, a letter dated September 24, 1974 from the Applicant to the U.S. Atomic Energy Commission

containing current information relating to financial qualifications (Tr.682);

Affidavit of Jim C. Peterson, AEC Regulatory Staff, regarding Applicant's

Financial Qualifications. (Tr. following p.681)

II. FINDINGS OF FACT - RADIOLOGICAL HEALTH AND SAFETY

A. Description of Application and Staff Analysis

II-1. The Applicant's Preliminary Safety Analysis Report (PSAR) (TVA Ex. 5) and application (TVA Ex. 6) include detailed information on the site; a description of the plant design, including the general design criteria by which compliance with Appendix A of 10 CFR Part 50 will be achieved; an analysis of the safety related structures, systems and components; an analysis of postulated accidents; a summary of the quality assurance programs; the technical and financial qualifications of the Applicant; an analysis of the preliminary plant security plans and consideration relating to the common defense and security of the United States. The Board finds that the application properly describes the facility in accordance with the Commission's regulations and the notice of hearing.

II-2. The Staff's Safety Evaluation Report (SER) including its Supplement No. 1, details the Staff review of all aspects of the application including siting characteristics, reactor design, safety systems, quality assurance matters, conformance to general design criteria and AEC Regulatory Guides, financial qualifications, and matters concerning the common defense and security of the United States.

B. Features of the Proposed Plant and Its Design

II-3. The facility is proposed to be located on a 1500 acre site described supra, at p.1. Pursuant to 10 CFR Part 100, the Applicant has identified the combined cities of Scottsboro and Hollywood, Alabama, 4 miles west of the site, as the population center because it is expected to have a population of greater than 25,000 residents by 1990 (SER 2.1; PSAR 2.1.3.5). In accordance with the requirements of 10 CFR 100, the site is owned and controlled by the Applicant and it has defined the low population zone to be a circle with a 2 mile radius surrounding the plant. The minimum exclusion distance is 914 meters (SER 2.1). There are no gas lines, military facilities or significant industries located within 5 miles of the site which might present a hazard to the safe operation of the Bellefonte plant (SER 2.2; PSAR 2.2). The Scottsboro Airport, located 4.3 miles from the proposed facility, is the only activity within 5 miles of the Bellefonte site which might have a significant effect on the safe operation of the facility. Based on a reasonable growth projection for the airport, the probability of damaging aircraft impacts is remote and therefore, need not be considered (SER 2.2; PSAR Q2.52 and Q2.56). The plant design adequately takes into account the physical characteristics of the site such as seismology, meteorology, geology and hydrology. The Board finds that the plant site location and facility design conform with the requirements

of 10 CFR Part 100 for operation of the reactors at their design power level; since the engineered safety features provide adequate protection against the consequences of accidents, should one occur, and insure a low risk to the public.

II-4. The principal features of the design of the Bellefonte plant are similar to those evaluated and approved previously by the Staff for other nuclear power plants now under construction or in operation, especially North Anna Power Station, Units 3 and 4. (SER 1.3). The nuclear steam supply system (NSSS) for each unit will consist of a pressurized water reactor designed by Babcock & Wilcox, using two heat transport loops. (SER 1.2). The reactor core will be composed of uranium dioxide pellets enclosed in zircaloy tubes (SER 1.2). Water will serve as both the moderator and the coolant and will be circulated through the reactor core by 4 coolant pumps (SER 1.2). The NSSS for each unit will be housed inside a steel lined, pre-stressed concrete, cylindrical containment structure which, in turn, will be completely enclosed by a reinforced concrete structure called the secondary containment building (SER 1.2; PSAR 3.8.1 and 3.8.4). The containment, including penetrations, has been designed to safely confine radioactive material that could be released in the event of an accident and therefore conforms to all relevant requirements of 10 CFR 100 (SER 1.2).

II-5. During routine operation of the plant, small quantities of radioactive materials will be released to the environment. Treatment will be provided for these effluents by the radioactive waste management system, which will be designed to provide for the control, handling and treatment of radioactive liquid, gaseous and solid wastes (SER 11.0). This radioactive waste management system is capable of reducing effluents to the lowest practicable levels in accordance with the requirements of 10 CFR Parts 20 and 50 (SER 11.2, 11.3, and 11.4; PSAR 11.2.1, 11.3.1, and 11.4.1).

II-6. The plant incorporates a large number of engineered safety features (ESF) designed to assure safe shutdown in case of an accident, and to limit accident consequences (SER 6.1). These features include the containment heat removal systems, containment isolation system, the emergency core cooling system, secondary containment cleanup system and auxiliary feedwater system (SER 6.2.2, 6.2.3, 6.2.4, 6.3 and 6.5; PSAR 6.2.2, 6.2.3, 6.2.4, 6.3 and 10.4.7.2).

II-7. During the public evidentiary hearing in July 1974, the Board inquired (Tr.265) as to the availability of emergency power in the event of flooding. Staff witness Davis and Applicant's witness McConnell testified that the offsite power system is highly reliable and will be available in all

but the most severe design basis events considered in 10 CFR Part 50, Appendix A, Criterion 2 (GDC2) (natural phenomenon) such as the probable maximum flood (Testimony following Tr. 666, 678). They further testified that in the unlikely event of extreme flooding with subsequent loss of the offsite power system, the onsite power system is capable of supplying sufficient electrical power to simultaneously mitigate a design basis accident in one unit and safely shutdown the other unit. Therefore, they concluded, and the Board agrees, that these systems conform to the relevant requirements of 10 CFR Part 50, Appendix A.

II-8. Based on our review of the documentation related to the design of the facility in this proceeding as discussed above, the Board concurs with the Staff that the Bellefonte facility can be designed to conform to the general design criteria set forth in 10 CFR Part 50, Appendix A (SER 1.5, 3.1) and all other relevant regulations.

C. Research and Development

II-9. Although the plant design is primarily based upon proven technological concepts, TVA has identified some research and development programs confirming the design margins, being conducted by Babcock & Wilcox, which are applicable to safety features or components in the Bellefonte plant (SER 1.7, PSAR 1.5). These include an integrated test program

to confirm the design margins associated with the 17 x 17 fuel assembly design, reactor vessel flow tests and fuel densification tests (SER 1.7 and 4.4, PSAR 1.5.3) and reactor coolant pump overspeed. The Staff has concluded that safety features or components, which require research and development have been identified by the Applicant and that these items have feasible engineering solutions. Their final resolution will remain open so that the best available information can be utilized when the reactor design is finalized. This is permissible under 10 CFR § 50.35(a)(3) and (a)(4).

D. Applicant's Technical Qualifications

II-10. Applicant has a long history of participation in the development of nuclear power, including conducting of nuclear courses for its employees, and its current experience in the design and construction of the Browns Ferry Nuclear Plant, Sequoyah Nuclear Plant and Watts Bar Nuclear Plant (SER 1.4, 13.1, 17.1, 17.2, 21.0, and p.6 of the Testimony of Jack E. Gilleland following Tr. p.651). TVA will design, and construct the integrated plant (SER 1.4). The Board finds the Applicant technically qualified to design and construct the proposed facility.

E. Quality Assurance

II-11. The description of the Quality Assurance (QA) Program for TVA and Babcock & Wilcox (B&W) for the design and construction of Bellefonte Nuclear Plant, Units 1 and 2 is contained in Chapter 17 of the PSAR, as amended. The Staff evaluated this information, as well as the appropriate quality assurance manuals which will implement these programs, and found that the requirements of Appendix B to 10 CFR Part 50 had been met. Based on our review of the record (SER 17 and PSAR 17) the Board is satisfied that the QA organizations for TVA and B&W provide QA personnel with sufficient authority and organizational freedom to perform their crucial functions effectively and without reservation. We further find that the QA Program describes adequate QA procedures, requirements, and controls, demonstrating that quality related activities will be conducted in accordance with the requirements of Appendix B to 10 CFR Part 50.

F. Applicant's Financial Qualifications

II-12. At the time the application was filed in this proceeding in 1973, the Applicant estimated the total cost of the facility to be \$796 million. Since the Staff (SER Supp.20) considered this projected cost to be unrealistically low in 1974, TVA submitted updated information which indicated a revised estimate of \$1,097.3 million total cost for the facility. On September 24, 1974, the

Staff received additional financial information from TVA relating to their present financial condition (Staff Ex. 6). Based on this information, the Staff reached the conclusion that TVA was financially qualified to design and construct the proposed facility based on the following considerations: (1) increased demand for electric energy in the TVA service area; (2) TVA's method of financing new power facilities; (3) TVA's authority to set its own rates; and (4) TVA's present financial condition (Affidavit of Jim C. Petersen", introduced into the record following Tr. p.681). TVA proposes to finance construction of the plant as an integral part of its construction program through power revenues and borrowed funds (Gilleland testimony, Tr. following p.651). Based on the final set of cost calculations presented to the Staff and on a review of the earnings history of the Applicant, their authority to establish their own rates, as well as their provisions for depreciation, deferred taxes and their proven history of successfully issuing bonds, the Board concludes that it is financially qualified to construct the facility.

G. Common Defense and Security

II-13. The activities to be conducted will be within the jurisdiction of the United States and that all the directors and principal officers of the Applicant are citizens of the United States. TVA is a corporate agency of the Federal Government (SER 19.0).

The Applicant is not owned, dominated or controlled by an alien, a foreign corporation or a foreign government. The activities to be conducted do not involve any restricted data, but the Applicant has agreed to safeguard any such data that might become involved in accordance with the requirements of 10 CFR Part 50. The Applicant will rely upon obtaining fuel as it is needed from sources of supply available for civilian purposes, so that no diversion of special nuclear material from military purposes is involved (SER 19.0). Therefore, we find that the activities to be performed will not be inimical to the common defense and security.

H: Conclusions of the Regulatory Staff

II-14. Based on its review of the application, the Staff concluded (SER 21):

1. The applicant has described the proposed design of the facility including, but not limited to, the principal architectural and engineering criteria for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public;
2. Such further technical or design information as may be required to complete the safety analysis and which reasonably can be left for later consideration will be supplied in the final safety analysis report;

3. Safety features or components which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, research and development programs reasonably designed to resolve safety questions associated with such features or components;
4. 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 facilities can be constructed and operated at the proposed location without undue risk to the health and safety of the public;
5. The applicant is qualified technically to design and construct the proposed facility;
6. The applicant has estimated the costs reasonably and is qualified financially to design and construct the proposed facility; and

7. The issuance of permits for construction of the facility will not be inimical to the common defense and security or to the health and safety of the public.

- I. Independent Review of the Advisory Committee on Reactor Safeguards

II-15. The Atomic Energy Commission's Advisory Committee on Reactor Safeguards (ACRS) conducted an independent review of the application. The Bellefonte facility was considered at a subcommittee meeting on June 18, 1974, and at a full ACRS meeting, on July 11, 1974. In a letter dated July 16, 1974, to the Chairman of the Commission (SER, Supp. Appendix D), the ACRS identified items requiring further consideration, including 17 x 17 fuel array and its effect on ECCS capability, reactor protection system, guard pipes for process lines, containment rock anchors, instrumentation to monitor the course of an accident, reactor coolant pump overspeed, and continuing concern regarding generic problems related to large water reactors. In the letter, the ACRS concluded that these items can be resolved during construction and that, if due consideration is given to these items, the Bellefonte Plant, Units 1 and 2 "...can be constructed with reasonable assurance that they can be operated without undue risk to the health and safety of the public".

III. CONCLUSIONS OF LAW

The Board has given careful consideration to all the documentary and oral evidence presented by the parties. Based upon our review of the entire record in this proceeding, the Board, in accordance with 10 CFR § 50.35(a) finds that:

- (1) The Applicant has described the proposed design of the facilities, 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;
- (2) 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.
- (3) Safety features or components, if any, which require research and development have been described by the Applicant, and the Applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components; and
- (4) On the basis of the foregoing, there is a reasonable assurance that (a) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facilities, and (b) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facilities can be constructed and operated at the proposed location without undue risk to the health and safety of the public.
- (5) The Applicant is technically qualified to design and construct the proposed facilities.

- (6) The Applicant is financially qualified to design and construct the proposed facilities.
- (7) The issuance of permits for construction of the facilities will not be inimical to the common defense and security or to the health and safety of the public.

The Board has also determined, in accordance with Appendix D to Part 50 of the Commission's Regulations, that:

- (1) The requirements of § 102(2)(C) and § 102(2)(D) of NEPA and Appendix D to 10 CFR Part 50 of the Commission's Regulations have been complied with in this proceeding.
- (2) Upon completion of independent consideration of the final balance among conflicting factors contained in the record of the proceeding, the appropriate action to be taken is the issuance of construction permits, conditioned as set forth herein.

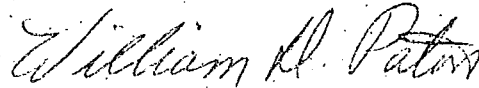
IV. ORDER

Based on the Board's Findings and Conclusions set forth in the Board's Partial Initial Decision related to environmental matters and site suitability, dated September 6, 1974, and the Board's Findings and Conclusions set forth in this Partial Initial Decision, and pursuant to the Atomic Energy Act of 1954, as amended, and the Commission's Regulations, IT IS ORDERED that the Director of Regulation is authorized to issue construction permits to the Tennessee Valley Authority to construct the Bellefonte Nuclear Plant Units 1 and 2, consistent with the terms of the Initial Decision, substantially in the form of Attachment A hereto.

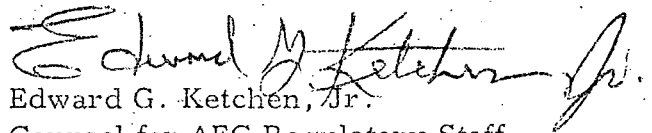
IT IS FURTHER ORDERED, in accordance with Sections 2.760, 2.762, 2.764, 2.785 and 2.786 of the Commission's Rules of Practice good cause not having been shown to the contrary, that this Initial Decision shall become effective immediately and shall constitute, with respect to the matters covered therein, the final action of the Commission forty-five (45) days after the issuance hereof, subject to any review pursuant to the Commission's Rules of Practice. Exceptions to this Initial Decision may be filed by any party within seven (7) days after service of this Initial Decision. Within fifteen (15) days thereafter (twenty (20) days in the case of the Staff) any party filing such exceptions shall file a brief in support thereof. Within

fifteen (15) days of the filing of the brief of the appellant (twenty (20) days in the case of the Staff) any other party may file a brief in support of, or in opposition to, the exceptions.

Respectfully submitted,



William D. Paton
Counsel for AEC Regulatory Staff



Edward G. Ketchen, Jr.
Counsel for AEC Regulatory Staff

Dated at Bethesda, Maryland
this 13th day of November, 1974

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-438

BELLEFONTE NUCLEAR PLANT, UNIT 1

CONSTRUCTION PERMIT

Construction Permit No. CPPR-

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 Tennessee Valley Authority (the Applicant) has described the proposed design of the Bellefonte Nuclear Plant, Unit 1 (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 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 50, Appendix D 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 Initial Decision of the Atomic Safety and Licensing Board, dated _____, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the Applicant for a utilization facility designed to operate at 3600 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 Bellefonte Nuclear Plant, Unit 1 will be located on the Applicant's site in Jackson County, Alabama.

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 June 1, 1979, and the latest date for completion is December 1, 1979.
 - B. The facility shall be constructed and located at the site as described in the application, in Jackson County, Alabama.
 - 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. This facility is subject to the following conditions for the protection of the environment:

- (1) An approved sampling program, as outlined in Section 5.4.2.5 and 6.2.1.1 of the AEC staff's Final Environmental Statement (SFES) will be implemented to obtain data necessary for assessment of the significance of the loss of ichthyoplankton through entrainment in the proposed intake.
- (2) The data obtained in the program specified in (1) above shall be submitted to the staff for review on a continuing basis and shall form the basis for a final decision on the acceptability of the proposed intake. The results will be subjected to thorough evaluation and a decision on the intake acceptability will be made on the basis of a cost-benefit analysis which will include both projected loss of fisheries resources on the entire reservoir and real and projected costs for the plant.
- (3) The applicant shall not use the broadcast application of herbicides on the right-of-way covered under Step One (Section 3.3, SFES) of the transmission line construction plan. (Section 5.4.1 and Appendix B, SFES).

The applicant shall conduct studies which will assess the impacts of various alternative methods of transmission

- line construction and maintenance, and prior to any construction of Steps Two and Three (Section 3.3 SFES), the applicant shall submit (1) for staff evaluation the results of these studies and (2) an updated version of its proposed clearing and maintenance methods for staff approval. This submittal should include analysis of cost experience factors as well as environmental impacts such as the effects on vegetation, wildlife and soil stability. (Section 4.1.2 and 9.2.4 SFES)
- (4) Prior to initiating construction of the discharge facility, the applicant shall provide the results of thermal-hydraulic analytical studies and plans for physical modelling experiments to be conducted in support of the final design and location of the plant cooling water discharge. (Sections 5.4.2.3.1 and 9.2.5 SFES)
- (5) The applicant shall take the necessary mitigating actions, including those summarized in Section 4.4, SFES, during construction of the plant and associated transmission lines to avoid unnecessary adverse environmental impacts from construction activities.

- (6) 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 the construction permit.
- (7) 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 SFES, the applicant shall provide written notification to the Director of Licensing.
- (8) The applicant may develop either, but not both, of the two alternative access routes to the plant as the permanent plant access road; provided that approximately 500 acres of land located on the northeast tip of Bellefonte peninsula will be developed as a "generally dispersed recreation area" as defined in Tennessee Valley Authority's Recreation Plan, Volume 1, Methodology (1973); and that the proposed recreation area will be developed consistent with the maximum "peak hour recreation visits" of approximately 800 visits within a two mile radius of the plant for the life of the facility.

E. In view of the fact that the Attorney General has not recommended an antitrust hearing in this matter, that no antitrust issues have been raised by another in a manner according with the Commission's Rules of Practice, and that no finding has been made that an antitrust hearing is otherwise required (10 CFR, Part 2, Section 2.104(d)), antitrust review of the application for this construction permit under Section 105c of the Atomic Energy Act of 1954, as amended, has been completed and a hearing thereon determined to be unnecessary.

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 were satisfied; and (d) the Applicant submits proof of financial protection

and the execution of an indemnity agreement as required by Section 140 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

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

Date of Issuance:

UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
TENNESSEE VALLEY AUTHORITY) Docket Nos. 50-438
) 50-439
(Bellefonte Nuclear Plant,)
Units 1 and 2))

AEC REGULATORY STAFF'S
PROPOSED TRANSCRIPT CORRECTIONS

The AEC Regulatory Staff proposes the following transcript corrections:

Wednesday, October 16, 1974

<u>PAGE</u>	<u>LINE</u>	<u>CORRECTION</u>
620	14	Add a period after the word "Bar"; change the words "and a" to the words "I am a".
645	20	Change the words "took in into" to the words "took it into".
646	16	Add the word "and" between the words "naturally" and "in".
646	18	Change "antural" to the word "natural".
677	5	Change "quarter" to "core".

Respectfully submitted,



William D. Paton
Counsel for AEC Regulatory Staff

Dated at Bethesda, Maryland
this 13th day of November, 1974