

Docket

MAR 6 1981

Docket Nos. 50-259  
50-260  
and 50-~~259~~ 296

Mr. Hugh G. Parris  
Manager of Power  
Tennessee Valley Authority  
500AC Chestnut Street Tower II  
Chattanooga, Tennessee 37401

Dear Mr. Parris:

The Commission has issued the enclosed Amendment Nos. 69, 65 and 41 to Facility License Nos. DPR-33, DPR-52 and DPR-68, respectively, for the Browns Ferry Nuclear Plant, Units Nos. 1, 2 and 3. These amendments consist of changes to the Appendix B Environmental Technical Specifications in response to your request dated August 29, 1979 (TVA BFNP TS 130).

These amendments revise the Environmental Technical Specifications to: (1) delete section 2.1 which presently specifies limiting conditions of operation (LCO) on thermal discharge limits, (2) delete section 2.2 which specifies LCOs for chemical discharges to the aquatic environment, (3) delete section 3.1.2 which describes the expected maximum concentrations of chemicals of the plant effluents before and after mixing in the river, (4) delete Section 5.4 which specifies actions to be taken if a water quality LCO is exceeded, (5) delete section 5.6.3.b which specifies reporting requirements when an LCO on water quality is exceeded, (6) delete item 5.7.1.C which specifies the records and logs to be maintained on LCO violations of water quality and (7) change the titles in section 5.0 (Administrative Controls) of the offices within TVA responsible for environmental activities.

Operating requirements identified in sections 2.0, and 3.1.2 are duplicative of those conditions regulated by Browns Ferry Nuclear Plant's NPDES Permit No. AL0022080 which was issued to TVA on June 30, 1977. The NPDES permit specifies the specific effluent limitations for thermal, chemical, and sanitary waste discharges originating from the facilities and reporting requirements necessary to determine compliance with the effluent limitations. The existing limiting conditions of operation on water quality and the aquatic monitoring and reporting requirements are being deleted from the Browns Ferry Environmental Technical Specifications as a matter of law. Since the deletion of these conditions is a ministerial action required as a matter of law, no environmental impact assessment need be prepared as a condition precedent to taking this action. The changes to Section 5.0 -

8103190249

OFFICE							
SURNAME							
DATE							

Mr. Hugh G. Parris

- 2 -  
MAR 6 1981

Administrative Controls to change the titles and organizational elements within TVA responsible for environmental activities is being made to reflect recent organizational changes within TVA.

This is an administrative action that does not authorize a change in effluent types or total amounts nor an increase in power level, and will not result in any significant environmental impact. Having made this determination we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

These changes to the Environmental Technical Specifications do not involve significant new safety information of a type not considered by a previous Commission safety review of the facility. They do not involve a significant increase in the probability or consequences of an accident, do not involve a significant decrease in a safety margin and therefore do not involve a significant hazards consideration. We have also concluded that there is reasonable assurance that the health and safety of the public will not be endangered by these actions.

A copy of the related Notice of Issuance is also enclosed.

Sincerely,

Original Signed by  
T. A. Ippolito  
Thomas A. Ippolito, Chief  
Operating Reactors Branch #2  
Division of Licensing

Enclosures:

- 1. Amendment No. to DPR-33
- 2. Amendment No. to DPR-52
- 3. Amendment No. to DPR-68
- 4. Notice

Distribution:

- Docket File NSIC
- NRC PDR TERA
- Local PDR A. Rosenthal
- ORB #2 Rdg xASAK ASLAB
- D. Eisenhut/R. Purple
- S. Norris
- R. J. Clark
- OELD
- OI&E (5)
- B. Jones
- B. Scharf
- J. Wetmore
- ACRS (16)
- R. Diggs
- R. Ballard
- J. Heltemes, AEOD

cc w/encls:  
See next page

*no legal objections make a copy of letter*

OFFICE	DL:ORB#2	DL:ORB#2	DL:ORB#2	DL:OR	OELD		
USERNAME	RJC:ark:ms	T. Ippolito	SNorris	J. Novak	Laverly		
DATE	2/19/81	2/24/81	2/24/81	2/24/81	2/2/81		



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555  
March 6, 1981

Docket Nos. 50-259  
50-260  
and 50-269

Mr. Hugh G. Parris  
Manager of Power  
Tennessee Valley Authority  
500A Chestnut Street Tower II  
Chattanooga, Tennessee 37401

Dear Mr. Parris:

The Commission has issued the enclosed Amendment Nos. 69, 65 and 41 to Facility License Nos. DPR-33, DPR-52 and DPR-68, respectively, for the Browns Ferry Nuclear Plant, Units Nos. 1, 2 and 3. These amendments consist of changes to the Appendix B Environmental Technical Specifications in response to your request dated August 29, 1979 (TVA BFNP TS 130).

These amendments revise the Environmental Technical Specifications to: (1) delete section 2.1 which presently specifies limiting conditions of operation (LCO) on thermal discharge limits, (2) delete section 2.2 which specifies LCOs for chemical discharges to the aquatic environment, (3) delete section 3.1.2 which describes the expected maximum concentrations of chemicals of the plant effluents before and after mixing in the river, (4) delete Section 5.4 which specifies actions to be taken if a water quality LCO is exceeded, (5) delete section 5.6.3.b which specifies reporting requirements when an LCO on water quality is exceeded, (6) delete item 5.7.1.C which specifies the records and logs to be maintained on LCO violations of water quality and (7) change the titles in section 5.0 (Administrative Controls) of the offices within TVA responsible for environmental activities.

Operating requirements identified in sections 2.0, and 3.1.2 are duplicative of those conditions regulated by Browns Ferry Nuclear Plant's NPDES Permit No. AL0022080 which was issued to TVA on June 30, 1977. The NPDES permit specifies the specific effluent limitations for thermal, chemical, and sanitary waste discharges originating from the facilities and reporting requirements necessary to determine compliance with the effluent limitations. The existing limiting conditions of operation on water quality and the aquatic monitoring and reporting requirements are being deleted from the Browns Ferry Environmental Technical Specifications as a matter of law. Since the deletion of these conditions is a ministerial action required as a matter of law, no environmental impact assessment need be prepared as a condition precedent to taking this action. The changes to Section 5.0 -

March 6, 1981

Administrative Controls to change the titles and organizational elements within TVA responsible for environmental activities is being made to reflect recent organizational changes within TVA.

This is an administrative action that does not authorize a change in effluent types or total amounts nor an increase in power level, and will not result in any significant environmental impact. Having made this determination we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

These changes to the Environmental Technical Specifications do not involve significant new safety information of a type not considered by a previous Commission safety review of the facility. They do not involve a significant increase in the probability or consequences of an accident, do not involve a significant decrease in a safety margin and therefore do not involve a significant hazards consideration. We have also concluded that there is reasonable assurance that the health and safety of the public will not be endangered by these actions.

A copy of the related Notice of Issuance is also enclosed.

Sincerely,



Thomas A. Ippolito, Chief  
Operating Reactors Branch #2  
Division of Licensing

Enclosures:

1. Amendment No. 69 to DPR-33
2. Amendment No. 65 to DPR-52
3. Amendment No. 41 to DPR-68
4. Notice

cc w/encls:  
See next page

Mr. Hugh G. Parris

cc:

H. S. Sanger, Jr., Esquire  
General Counsel  
Tennessee Valley Authority  
400 Commerce Avenue  
E 11B 33C  
Knoxville, Tennessee 37902

Mr. Ron Rogers  
Tennessee Valley Authority  
400 Chestnut Street, Tower II  
Chattanooga, Tennessee 37401

Mr. Charles R. Christopher  
Chairman, Limestone County Commission  
P. O. Box 188  
Athens, Alabama 35611

Ira L. Myers, M.D.  
State Health Officer  
State Department of Public Health  
State Office Building  
Montgomery, Alabama 36104

Mr. H. N. Culver  
249A HBD  
400 Commerce Avenue  
Tennessee Valley Authority  
Knoxville, Tennessee 37902

Athens Public Library  
South and Forrest  
Athens, Alabama 35611

Director, Office of Urban & Federal  
Affairs  
108 Parkway Towers  
404 James Robertson Way  
Nashville, Tennessee 37219

Director, Criteria and Standards  
Division  
Office of Radiation Programs (ANR-460)  
U. S. Environmental Protection Agency  
Washington, D. C. 20460

U. S. Environmental Protection  
Agency  
Region IV Office  
ATTN: EIS COORDINATOR  
345 Courtland Street  
Atlanta, Georgia 30308

Mr. Robert F. Sullivan  
U. S. Nuclear Regulatory Commission  
P. O. Box 1863  
Decatur, Alabama 35602

Mr. John F. Cox  
Tennessee Valley Authority  
W9-D 207C  
400 Commerce Avenue  
Knoxville, Tennessee 37902

Mr. Herbert Abercrombie  
Tennessee Valley Authority  
P. O. Box 2000  
Decatur, Alabama 35602



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-259

BROWNS FERRY NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 69  
License No. DPR-33

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Tennessee Valley Authority (the licensee) dated August 29, 1979, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C(2) of Facility License No. DPR-33 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 69 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas A. Ippolito, Chief  
Operating Reactors Branch #2  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 6, 1981.

ATTACHMENT TO LICENSE AMENDMENT NO. 69

FACILITY OPERATING LICENSE NO. DPR-33

DOCKET NO. 50-259

Revise Appendix B as follows:

1. Remove the following pages and replace with identically numbered pages:

1/2  
3/4  
5/6  
9/10

23/24  
25/26  
27/28

29/30  
41/42  
45/46

2. The underlined pages are the pages being changes; marginal lines on these pages indicate the revised area. The overleaf pages are provided for convenience.

## 1.0 DEFINITIONS

The following terms are defined for uniform interpretation of these specifications.

### Administrative Terminology

Environmental limiting condition for operation--any limiting condition for plant operation as stated in Section 2 of the Browns Ferry Nuclear Plant Environmental Technical Specifications.

Unusual event with the potential for a significant environmental impact--an event that results in noncompliance with an environmental technical specification, or an event that results in uncontrolled or unplanned releases of chemical, radioactive, thermal, or other discharges from the Browns Ferry Nuclear Plant in excess of applicable Federal, state, and local regulations.

### Thermal Properties

Thermal limits--limits defined for temperatures, spatial changes in temperature, and temporal changes in temperature within Wheeler Reservoir that are attributable to thermal discharges from Browns Ferry Nuclear Plant.

Intake temperature--the average temperature at a given time within the intake system at a point beyond the intake pumps.

Discharge temperature--the average temperature at a given time in the cooling water return channel or at the condenser outlet butterfly valves.

Delta T ( $\Delta T$ )--the difference in temperatures of the river at the control monitors attributable to thermal discharges from Browns Ferry Nuclear Plant.

### Instrumentation Properties

Accuracy--a measure of the difference between the true and measured values of a given parameter, hence a measure of error.

Minimum detectable level--that level below which a specific detector, instrument, or analysis is unable to detect the presence of a given constituent.

Sensitivity--the minimum change in the variable detected by a given sensor.

2.0 LIMITING CONDITIONS FOR OPERATION

2.1 THERMAL DISCHARGE LIMITS

Page deleted

2.1 Continued

Page deleted

Amendment Nos. 52, 69

Page deleted

2.2 CHEMICAL

2.2.1 Makeup Water Treatment Plant

Page deleted

2.2 CHEMICAL (continued)

2.2.2 Chlorine

Page deleted

3.1.2 Other Chemicals

Page deleted

### 3.2 Land Management

3.2.1 Power Plant Site - The site shall be appropriately landscaped as allowed by completion of construction. All areas which are either unpaved or not committed for specific purposes will be provided with appropriate vegetative cover.

### 3.2.2 Transmission Line Right-of-Way Maintenance

#### Objective

The sole purpose of this section is to provide reporting requirements (to USNRC) on herbicide usage, if any, for purposes of right-of-way maintenance regarding only those transmission lines under USNRC's jurisdiction for the Browns Ferry Nuclear Plant.

#### Specification

A statement as to whether or not herbicides have been used in maintaining rights of way for those transmission lines associated with the Browns Ferry Nuclear Plant shall be provided. If herbicides have been used, a description of the types, volumes, concentrations, manners and frequencies of application, and miles of right of way that have been treated shall be included.

#### Reporting Requirements

Information as specified above shall be provided in the annual environmental operating report.

#### Basics

Vegetation growth on a transmission line right of way must be controlled in such a manner that it will neither interfere with safe and reliable operation of the line nor impede restoration of service when outages occur. Vegetation growth is controlled by mechanical cutting and the limited use of herbicides. Selected chemicals approved by EPA for use as herbicides are assigned (by EPA) label instructions which provide guidance on and procedures for their use.

### 3.3 Onsite Meteorological Monitoring

The onsite meteorological monitoring program measures and documents meteorological conditions at the site, specifically at heights above ground that allow reasonable estimates of atmospheric dispersion conditions for airborne plant effluents. The onsite program shall conform to the recommendations and intent of Regulatory Guide 1.23, Onsite Meteorological Programs (February 1972), and include instruments to sense wind speed and direction at 10m, 46m, and 91m; to allow calculation of vertical temperature gradient between 10m and 46m and between 10m and 91m; and to measure ambient temperature and dew point at 10m. The location of the meteorological tower is as specified in Section 2.3.7 of the Browns Ferry Nuclear Plant Final Safety Analysis Report (see Amendment 63). A quality assurance program shall be in effect for all meteorological measurements and observations.

## 5.0 ADMINISTRATIVE CONTROLS

### Objective

This section describes the administrative and management controls established to provide continuing protection to the environment and to implement the environmental Technical Specifications. Measures to be specified in this section include the assignment of responsibilities, organizational structure, operating procedures, review and audit functions, and reporting requirements.

### Specifications

#### 5.1 Responsibility

- 5.1.1 The power plant superintendent has responsibility for operating the plant in compliance with these Technical Specifications.
- 5.1.2 The Staff Chief, Environmental Compliance, is responsible for the non-radiological environmental monitoring program outside the plant. The Chief, Radiological Hygiene Branch is responsible for the radiological monitoring program outside the plant.

#### 5.2 Organization

- 5.2.1 The organization of TVA management which directly relates to operation of the plant is shown on Figure 5.2-1.
- 5.2.2 The principal organizations within TVA which are concerned with environmental matters related to nuclear power plant operations are the Office of Power, Office of Natural Resources, and the Office of Health and Safety. The Office of Power is directly responsible for operating the plant in accordance with specified requirements and conducting onsite monitoring. The Office of Natural Resources and the Office of Health and Safety are responsible for providing technical guidance, assistance, monitoring, and other services as needed for environmental compliance. The Environmental Compliance Staff is responsible for independent review and audit of procedures for meeting environmental specifications and limits. The organizations above report to the General Manager as shown in Figure 5.2.2.

#### 5.3 Review and Audit

- 5.3.1 The Environmental Compliance Staff is responsible for independent review and audit of procedures for meeting environmental specifications and limits.
- 5.3.2 The Office of Power Quality Assurance and Audit Staff shall ensure that a periodic audit of the environmental monitoring program is conducted at least once per calendar year.
- 5.3.3 The Office of Power Regulatory Staff conducts an interdisciplinary review of the following items:

- a. Preparation of the proposed environmental Technical Specifications.
- b. Coordination of environmental Technical Specification development with the safety Technical Specifications to avoid conflicts and maintain consistency.
- c. Proposed changes to the Environmental Technical Specifications and the evaluated impact of the change.
- d. Proposed written procedures, as described in Section 5.5 and proposed changes thereto which could significantly affect the plant's environmental impact.
- e. Proposed changes or modifications to plant systems or equipment which could significantly affect the plant's environmental impact and the evaluated impact of the changes.
- f. Results of the environmental monitoring programs prior to their submittal in each Annual Operating Report. See Sections 5.6.1 and 5.6.2.
- g. Reported instances of violations of environmental technical specifications. Where investigation indicates, evaluation and formulation of recommendations to prevent recurrence.

#### 5.4 Action to be Taken if an Environmental LCO is Exceeded

#### 5.5 Procedures

- 5.5.1 Detailed written procedures for the in-plant nonradiological monitoring program, including check-off lists, where applicable, shall be prepared by DNF and approved by the plant superintendent (or his designee) and adhered to.
- 5.5.2 Detailed written procedures for the environmental monitoring program outside the plant, including check-off lists, where applicable, shall be prepared, receive appropriate administrative approval and be adhered to.

A quality control program for the radiological environmental monitoring program has been established with the Alabama Department of Public Health Administration Laboratory and the Environmental Protection Agency, Montgomery, Alabama. Samples of air, water, milk, and vegetation collected around the BFNP are forwarded to these laboratories for analysis; and results are exchanged for comparison.

An internal quality control program for the radiological environmental monitoring program is being conducted whereby roughly one tenth of all samples are analyzed in duplicate. A quality control program is conducted with the Environmental Protection Agency in Las Vegas in which spiked samples are analyzed and the results compared.

5.5.3 All procedures described in Section 5.5.1 and all changes thereto shall be reviewed and approved prior to implementation and on an annual basis thereafter by the plant management. Temporary changes to procedures which do not change the intent of the original procedure may be made, provided such changes are documented and are approved by two of the following plant personnel:

Superintendent  
Assistant Superintendent  
Operations Supervisor  
Assistant Operations Supervisor  
Shift Engineer

5.6 Reporting Requirements

5.6.1 A report shall be prepared by the Office of Natural Resources and submitted to DNP following the end of each 12-month period of operation, which shall summarize the results of the nonradiological environmental monitoring program.

5.6.2 Routing Reporting

- a. A summary report shall be prepared for both the inplant monitoring program and the nonradiological monitoring programs and submitted to the Director of Division of Licensing, NRC, as part of the Annual Operating Report within 120 days after December 31 of each year.
- b. Radiological Environmental Monitoring

Routine Reporting

Reporting Requirements:

1. TVA shall prepare a report entitled "Environmental Radioactivity Levels - Browns Ferry Nuclear Plant - Annual Report." The report shall cover the previous 12 months of operation and shall be submitted to the Director of the NRC Region II Office (with a copy to the Director, Office of Nuclear Reactor Regulation) within 120 days after January 1 of each year. The report format shown in Regulatory Guide 4.8 Title 1 shall be used. The report shall include summaries, interpretations, and evaluations of the results of the radiological environmental surveillance activities for the report period, including a comparison with preoperational studies and/or operational controls (as appropriate), and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of irreversible damage are detected by the monitoring, the licensee shall provide an analysis of the problem and a proposed course of action to alleviate the problem.

2. Results of all radiological environmental samples taken shall be summarized and tabulated on an annual basis. In the event that some results are not available within the 120-day period, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

### 5.6.3 Non-Routine Reports

#### a. Radiological

##### Anomalous Measurements

1. If, during any 12-month report period, a measured level of radioactivity in any environmental medium other than those associated with gaseous radiiodine releases exceeds ten times the control station value, a written notification will be submitted within one week advising the NRC of this condition.\* This notification should include an evaluation of any release conditions, environmental factors, or other aspects necessary to explain the anomalous result.
2. If, during any 12-month report period, a measured level of radioactivity in any environmental medium other than those associated with gaseous radiiodine releases exceeds four times the control station value, a written notification will be submitted within 30 days advising the NRC of this condition. This notification should include an evaluation of any release conditions, environmental factors, or other aspects necessary to explain the anomalous result.
3. If individual milk samples show I-131 concentrations of 10 picocuries per liter or greater, a plan shall be submitted within 10 days advising the NRC of the proposed action to ensure the plant related annual doses will be within the design objective of 15  $\mu\text{rem}/\text{yr}/\text{reactor}$  to the thyroid of any individual.
4. If milk samples collected over a calendar quarter show average concentrations of 6.0 picocuries per liter or greater, a plan shall be submitted within 30 days advising the NRC of the proposed action to ensure the plant-related annual doses will be within the design objective of 15  $\mu\text{rem}/\text{yr}/\text{reactor}$  to the thyroid of any individual.

\*In the case of a tentatively anomalous value for radiostrontium, a confirmatory reanalysis of the original, a duplicate or a new sample may be desirable. In this instance the results of the confirmatory analysis shall be completed at the earliest time consistent with the analysis, and if the high value is real, the report to the NRC shall be submitted within one week following this analysis.

5. If such levels as discussed in 5.6.3(a)3 and 5.6.3(a)4 can be definitely shown to result from sources other than the Browns Ferry Nuclear Plant, the reporting action called for in 5.6.3(a)3 and 5.6.3(a)4 need not be taken. Justification for assigning high levels of radioactivity to sources other than the Browns Ferry Nuclear Plant must be provided in the annual report.

b. Nonradiological

Violations of the NPDES Permit or the State certification (pursuant to Section 401 of the Clean Water Act) shall be reported to the NRC by submittal of copies of the reports required by the NPDES Permit or certification. Changes and additions to the NPDES Permit or the State certification shall be reported to the NRC within 30 days following the date the change is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

c. Changes

1. Where a change to the plant design, the plant operation, or to procedures is planned which could have a significant adverse effect on the environment or which involves an environmental matter or question not previously reviewed and evaluated by the NRC, a request for the change shall be made to the NRC before implementation.
2. Changes or additions to permits and certificates required for the protection of the environment shall be reported. When the required changes are submitted to the concerned agency for approval, they shall also be submitted to the Director, Division of Licensing, USNRC, for information.
3. Requests for changes in environmental technical specifications shall be submitted to the Director, Division of Licensing, USNRC, for prior review and authorization.

5.7 Environmental Records

5.7.1 Operational information concerning the inplant portion of the environmental technical specifications shall be kept by DNP in a manner convenient for review. This includes plant records and/or logs as indicated below:

- a. Related plant operations
- b. Related maintenance activities
- c.
- d. Updated, corrected, and as-built drawings of the plant

Item (a) through (c) above shall be retained for a period of at least six years and item (d) shall be retained for the life of the plant.

5.7.2 Records and/or logs shall be made and retained in a manner convenient for review. This information concerning the environmental monitoring program is indicated below:

- a. Checks, inspections, tests, and calibration of components and systems.
- b. Principal maintenance activities associated with environmental monitoring equipment and systems.
- c. Results of environmental monitoring surveys related to BFP.

Items (a) and (b) shall be retained for a period of at least six years and item (c) shall be retained for the life of the plant.

Tab. 3.1.2-1

Source of Used Chemicals and  
Resulting End Product Chemicals

Page deleted

Table 3.1.2-2

SUPPLY OF CIVIL DISCHARGES

Page deleted

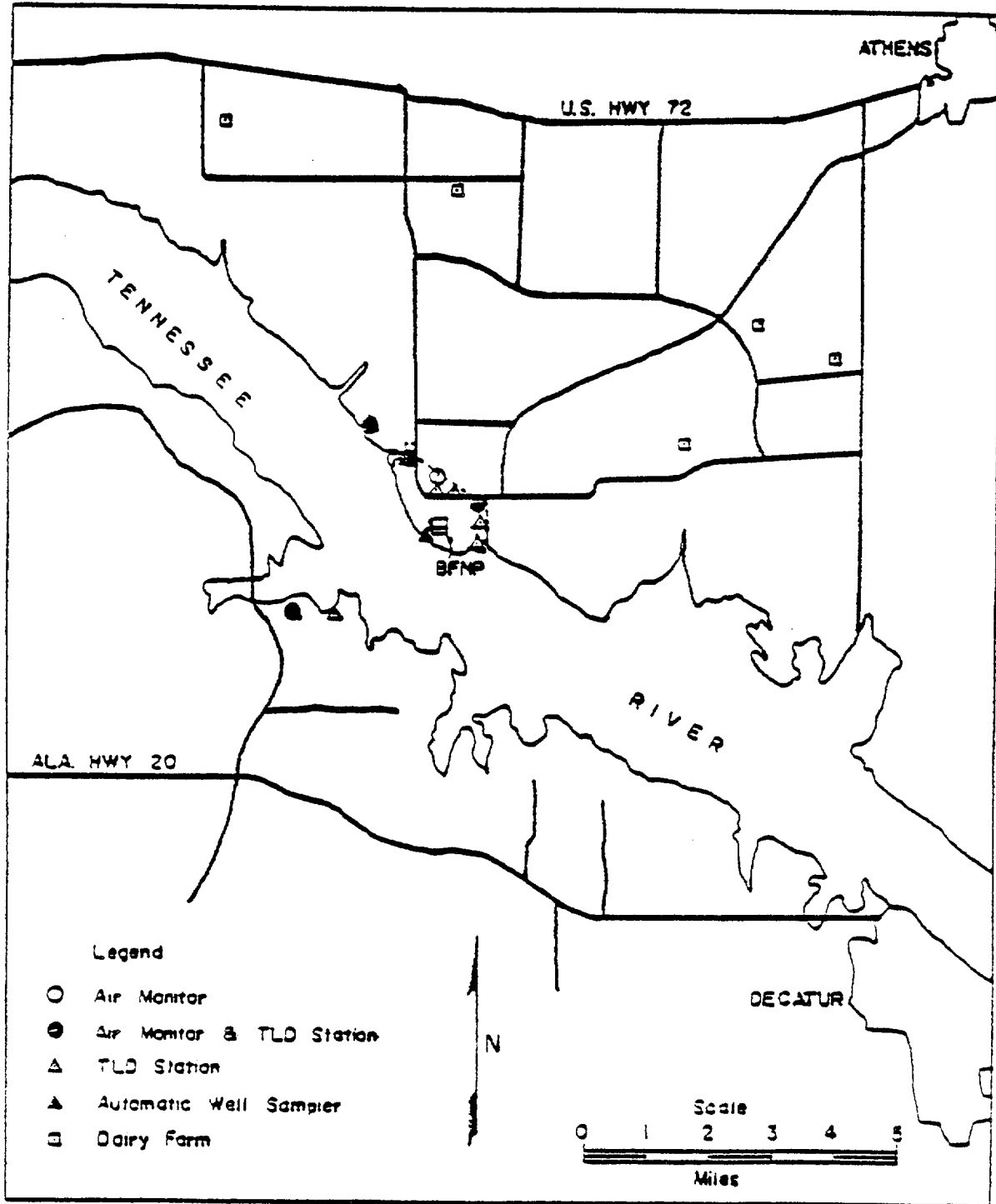
-41-

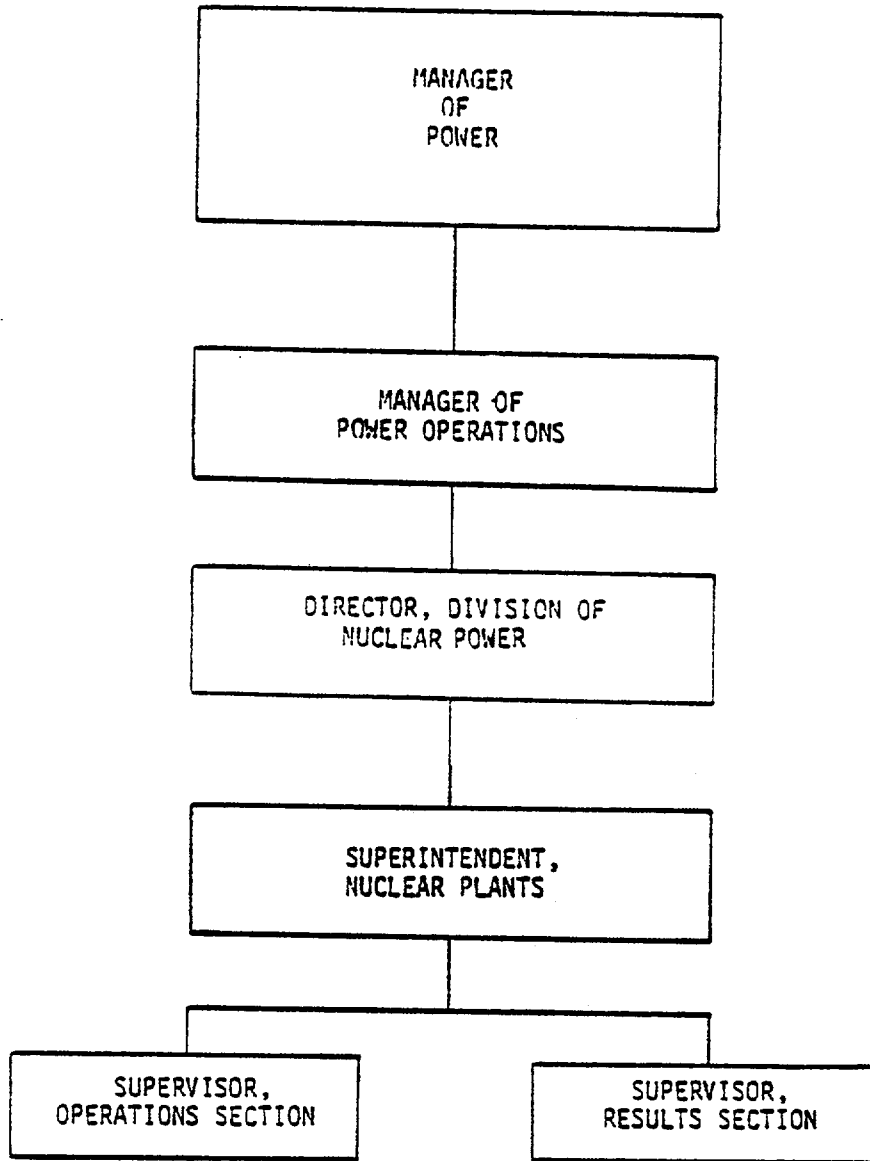
Figure 2.1-1  
deleted

Figure 4.2-1

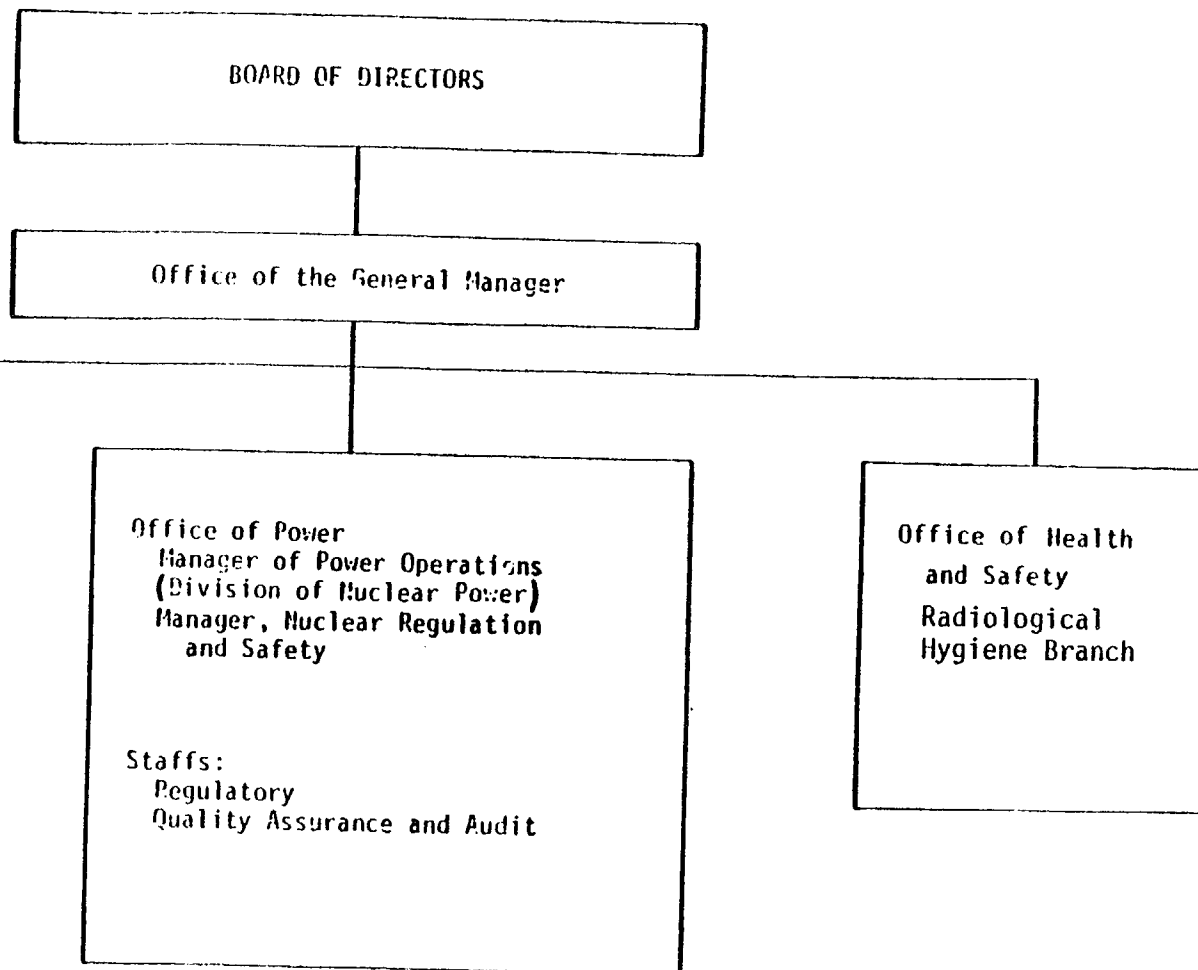
# LOCAL MONITORING STATIONS

BROWNS FERRY NUCLEAR PLANT





BROWNS FERRY NUCLEAR PLANT  
TVA Office of Power  
Organization for Operation  
of Nuclear Plants  
Figure 5.2-1



BROWN'S FERRY NUCLEAR PLANT  
Offices Directly or Indirectly Involved with Monitoring, Surveillance, or Report Aspects of Environmental Technical Specifications  
Figure 5.2-2



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-260

BROWNS FERRY NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 65  
License No. DPR-52

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Tennessee Valley Authority (the licensee) dated August 29, 1979, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C(2) of Facility License No. DPR-52 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 65, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas A. Ippolito, Chief  
Operating Reactors Branch #2  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 6, 1981.

## 1.0 DEFINITIONS

The following terms are defined for uniform interpretation of these specifications.

### Administrative Terminology

Environmental limiting condition for operation--any limiting condition for plant operation as stated in Section 2 of the Browns Ferry Nuclear Plant Environmental Technical Specifications.

Unusual event with the potential for a significant environmental impact--an event that results in noncompliance with an environmental technical specification, or an event that results in uncontrolled or unplanned releases of chemical, radioactive, thermal, or other discharges from the Browns Ferry Nuclear Plant in excess of applicable Federal, state, and local regulations.

### Thermal Properties

Thermal limits--limits defined for temperatures, spatial changes in temperature, and temporal changes in temperature within Wheeler Reservoir that are attributable to thermal discharges from Browns Ferry Nuclear Plant.

Intake temperature--the average temperature at a given time within the intake system at a point beyond the intake pumps.

Discharge temperature--the average temperature at a given time in the cooling water return channel or at the condenser outlet butterfly valves.

Delta T ( $\Delta T$ )--the difference in temperatures of the river at the control monitors attributable to thermal discharges from Browns Ferry Nuclear Plant.

### Instrumentation Properties

Accuracy--a measure of the difference between the true and measured values of a given parameter, hence a measure of error.

Minimum detectable level--that level below which a specific detector, instrument, or analysis is unable to detect the presence of a given constituent.

Sensitivity--the minimum change in the variable detected by a given sensor.

2.0 LIMITING CONDITIONS FOR OPERATION

2.1 THERMAL DISCHARGE LIMITS

Page deleted

2.1 Continued

Page deleted

Page deleted

2.2 CHEMICAL

2.2.1 Makeup Water Treatment Plant

Page deleted

2.2 CHEMICAL (continued)

2.2.2 Chlorine

Page deleted

3.1.2 Other Chemicals

Page deleted

### 3.2 Land Management

3.2.1 Power Plant Site - The site shall be appropriately landscaped as allowed by completion of construction. All areas which are either unpaved or not committed for specific purposes will be provided with appropriate vegetative cover.

### 3.2.2 Transmission Line Right-of-Way Maintenance

#### Objective

The sole purpose of this section is to provide reporting requirements (to USNRC) on herbicide usage, if any, for purposes of right-of-way maintenance regarding only those transmission lines under USNRC's jurisdiction for the Browns Ferry Nuclear Plant.

#### Specification

A statement as to whether or not herbicides have been used in maintaining rights of way for those transmission lines associated with the Browns Ferry Nuclear Plant shall be provided. If herbicides have been used, a description of the types, volumes, concentrations, manners and frequencies of application, and miles of right of way that have been treated shall be included.

#### Reporting Requirements

Information as specified above shall be provided in the annual environmental operating report.

#### Bases

Vegetation growth on a transmission line right of way must be controlled in such a manner that it will neither interfere with safe and reliable operation of the line nor impede restoration of service when outages occur. Vegetation growth is controlled by mechanical cutting and the limited use of herbicides. Selected chemicals approved by EPA for use as herbicides are assigned (by EPA) label instructions which provide guidance on and procedures for their use.

### 3.3 Onsite Meteorological Monitoring

The onsite meteorological monitoring program measures and documents meteorological conditions at the site, specifically at heights above ground that allow reasonable estimates of atmospheric dispersion conditions for airborne plant effluents. The onsite program shall conform to the recommendations and intent of Regulatory Guide 1.23, Onsite Meteorological Programs (February 1972), and include instruments to sense wind speed and direction at 10m, 46m, and 91m; to allow calculation of vertical temperature gradient between 10m and 46m and between 10m and 91m; and to measure ambient temperature and dew point at 10m. The location of the meteorological tower is as specified in Section 2.3.7 of the Browns Ferry Nuclear Plant Final Safety Analysis Report (see Amendment 63). A quality assurance program shall be in effect for all meteorological measurements and observations.

## 5.0 ADMINISTRATIVE CONTROLS

### Objective

This section describes the administrative and management controls established to provide continuing protection to the environment and to implement the environmental Technical Specifications. Measures to be specified in this section include the assignment of responsibilities, organizational structure, operating procedures, review and audit functions, and reporting requirements.

### Specifications

#### 5.1 Responsibility

- 5.1.1 The power plant superintendent has responsibility for operating the plant in compliance with these Technical Specifications.
- 5.1.2 The Staff Chief, Environmental Compliance, is responsible for the non-radiological environmental monitoring program outside the plant. The Chief, Radiological Hygiene Branch is responsible for the radiological monitoring program outside the plant.

#### 5.2 Organization

- 5.2.1 The organization of TVA management which directly relates to operation of the plant is shown on Figure 5.2-1.
- 5.2.2 The principal organizations within TVA which are concerned with environmental matters related to nuclear power plant operations are the Office of Power, Office of Natural Resources, and the Office of Health and Safety. The Office of Power is directly responsible for operating the plant in accordance with specified requirements and conducting onsite monitoring. The Office of Natural Resources and the Office of Health and Safety are responsible for providing technical guidance, assistance, monitoring, and other services as needed for environmental compliance. The Environmental Compliance Staff is responsible for independent review and audit of procedures for meeting environmental specifications and limits. The organizations above report to the General Manager as shown in Figure 5.2.2.

#### 5.3 Review and Audit

- 5.3.1 The Environmental Compliance Staff is responsible for independent review and audit of procedures for meeting environmental specifications and limits.
- 5.3.2 The Office of Power Quality Assurance and Audit Staff shall ensure that a periodic audit of the environmental monitoring program is conducted at least once per calendar year.
- 5.3.3 The Office of Power Regulatory Staff conducts an interdisciplinary review of the following items:

- a. Preparation of the proposed environmental Technical Specifications.
- b. Coordination of environmental Technical Specification development with the safety Technical Specifications to avoid conflicts and maintain consistency.
- c. Proposed changes to the Environmental Technical Specifications and the evaluated impact of the change.
- d. Proposed written procedures, as described in Section 5.5 and proposed changes thereto which could significantly affect the plant's environmental impact.
- e. Proposed changes or modifications to plant systems or equipment which could significantly affect the plant's environmental impact and the evaluated impact of the changes.
- f. Results of the environmental monitoring programs prior to their submittal in each Annual Operating Report. See Sections 5.6.1 and 5.6.2.
- g. Reported instances of violations of environmental technical specifications. Where investigation indicates, evaluation and formulation of recommendations to prevent recurrence.

#### 5.4 Action to be Taken if an Environmental LCO is Exceeded

#### 5.3 Procedures

- 5.5.1 Detailed written procedures for the in-plant nonradiological monitoring program, including check-off lists, where applicable, shall be prepared by DNP and approved by the plant superintendent (or his designee) and adhered to.
- 5.5.2 Detailed written procedures for the environmental monitoring program outside the plant, including check-off lists, where applicable, shall be prepared, receive appropriate administrative approval and be adhered to.

A quality control program for the radiological environmental monitoring program has been established with the Alabama Department of Public Health Administration Laboratory and the Environmental Protection Agency, Montgomery, Alabama. Samples of air, water, milk, and vegetation collected around the BFPN are forwarded to these laboratories for analysis; and results are exchanged for comparison.

An internal quality control program for the radiological environmental monitoring program is being conducted whereby roughly one tenth of all samples are analyzed in duplicate. A quality control program is conducted with the Environmental Protection Agency in Las Vegas in which spiked samples are analyzed and the results compared.

5.5.3 All procedures described in Section 5.5.1 and all changes thereto shall be reviewed and approved prior to implementation and on an annual basis thereafter by the plant management. Temporary changes to procedures which do not change the intent of the original procedure may be made, provided such changes are documented and are approved by two of the following plant personnel:

Superintendent  
Assistant Superintendent  
Operations Supervisor  
Assistant Operations Supervisor  
Shift Engineer

5.6 Reporting Requirements

5.6.1 A report shall be prepared by the Office of Natural Resources and submitted to DNP following the end of each 12-month period of operation, which shall summarize the results of the nonradiological environmental monitoring program.

5.6.2 Routing Reporting

a. A summary report shall be prepared for both the inplant monitoring program and the nonradiological monitoring programs and submitted to the Director of Division of Licensing, NRC, as part of the Annual Operating Report within 120 days after December 31 of each year.

b. Radiological Environmental Monitoring

Routine Reporting

Reporting Requirements:

1. TVA shall prepare a report entitled "Environmental Radioactivity Levels - Browns Ferry Nuclear Plant - Annual Report." The report shall cover the previous 12 months of operation and shall be submitted to the Director of the NRC Region II Office (with a copy to the Director, Office of Nuclear Reactor Regulation) within 120 days after January 1 of each year. The report format shown in Regulatory Guide 4.8 Title 1 shall be used. The report shall include summaries, interpretations, and evaluations of the results of the radiological environmental surveillance activities for the report period, including a comparison with preoperational studies and/or operational controls (as appropriate), and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of irreversible damage are detected by the monitoring, the licensee shall provide an analysis of the problem and a proposed course of action to alleviate the problem.

2. Results of all radiological environmental samples taken shall be summarized and tabulated on an annual basis. In the event that some results are not available within the 120-day period, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

### 5.6.3 Non-Routine Reports

#### a. Radiological

##### Anomalous Measurements

1. If, during any 12-month report period, a measured level of radioactivity in any environmental medium other than those associated with gaseous radiiodine releases exceeds ten times the control station value, a written notification will be submitted within one week advising the NRC of this condition.\* This notification should include an evaluation of any release conditions, environmental factors, or other aspects necessary to explain the anomalous result.
2. If, during any 12-month report period, a measured level of radioactivity in any environmental medium other than those associated with gaseous radiiodine releases exceeds four times the control station value, a written notification will be submitted within 30 days advising the NRC of this condition. This notification should include an evaluation of any release conditions, environmental factors, or other aspects necessary to explain the anomalous result.
3. If individual milk samples show I-131 concentrations of 10 picocuries per liter or greater, a plan shall be submitted within 10 days advising the NRC of the proposed action to ensure the plant related annual doses will be within the design objective of 15 mrem/yr/reactor to the thyroid of any individual.
4. If milk samples collected over a calendar quarter show average concentrations of 6.0 picocuries per liter or greater, a plan shall be submitted within 30 days advising the NRC of the proposed action to ensure the plant-related annual doses will be within the design objective of 15 mrem/yr/reactor to the thyroid of any individual.

\*In the case of a tentatively anomalous value for radiostrontium, a confirmatory reanalysis of the original, a duplicate or a new sample may be desirable. In this instance the results of the confirmatory analysis shall be completed at the earliest time consistent with the analysis, and if the high value is real, the report to the NRC shall be submitted within one week following this analysis.

5. If such levels as discussed in 5.6.3(a)3 and 5.6.3(a)4 can be definitely shown to result from sources other than the Browns Ferry Nuclear Plant, the reporting action called for in 5.6.3(a)3 and 5.6.3(a)4 need not be taken. Justification for assigning high levels of radioactivity to sources other than the Browns Ferry Nuclear Plant must be provided in the annual report.

b. Nonradiological

Violations of the NPDES Permit or the State certification (pursuant to Section 401 of the Clean Water Act) shall be reported to the NRC by submittal of copies of the reports required by the NPDES Permit or certification. Changes and additions to the NPDES Permit or the State certification shall be reported to the NRC within 30 days following the date the change is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

c. Changes

1. Where a change to the plant design, the plant operation, or to procedures is planned which could have a significant adverse effect on the environment or which involves an environmental matter or question not previously reviewed and evaluated by the NRC, a request for the change shall be made to the NRC before implementation.
2. Changes or additions to permits and certificates required for the protection of the environment shall be reported. When the required changes are submitted to the concerned agency for approval, they shall also be submitted to the Director, Division of Licensing, USNRC, for information.
3. Requests for changes in environmental technical specifications shall be submitted to the Director, Division of Licensing, USNRC, for prior review and authorization.

5.7 Environmental Records

5.7.1 Operational information concerning the inplant portion of the environmental technical specifications shall be kept by DNP in a manner convenient for review. This includes plant records and/or logs as indicated below:

- a. Related plant operations
- b. Related maintenance activities
- c.
- d. Updated, corrected, and as-built drawings of the plant

Item (a) through (c) above shall be retained for a period of at least six years and item (d) shall be retained for the life of the plant.

5.7.2 Records and/or logs shall be made and retained in a manner convenient for review. This information concerning the environmental monitoring program is indicated below:

- a. Checks, inspections, tests, and calibration of components and systems.
- b. Principal maintenance activities associated with environmental monitoring equipment and systems.
- c. Results of environmental monitoring surveys related to BFNP.

Items (a) and (b) shall be retained for a period of at least six years and item (c) shall be retained for the life of the plant.

Feb. 3.1.2-1

Sources of Used Chemicals and  
Recycling End Product Chemicals

Page deleted

Table 3.1.2-2  
SUMMARY OF MEDICAL DISCHARGES

Page deleted

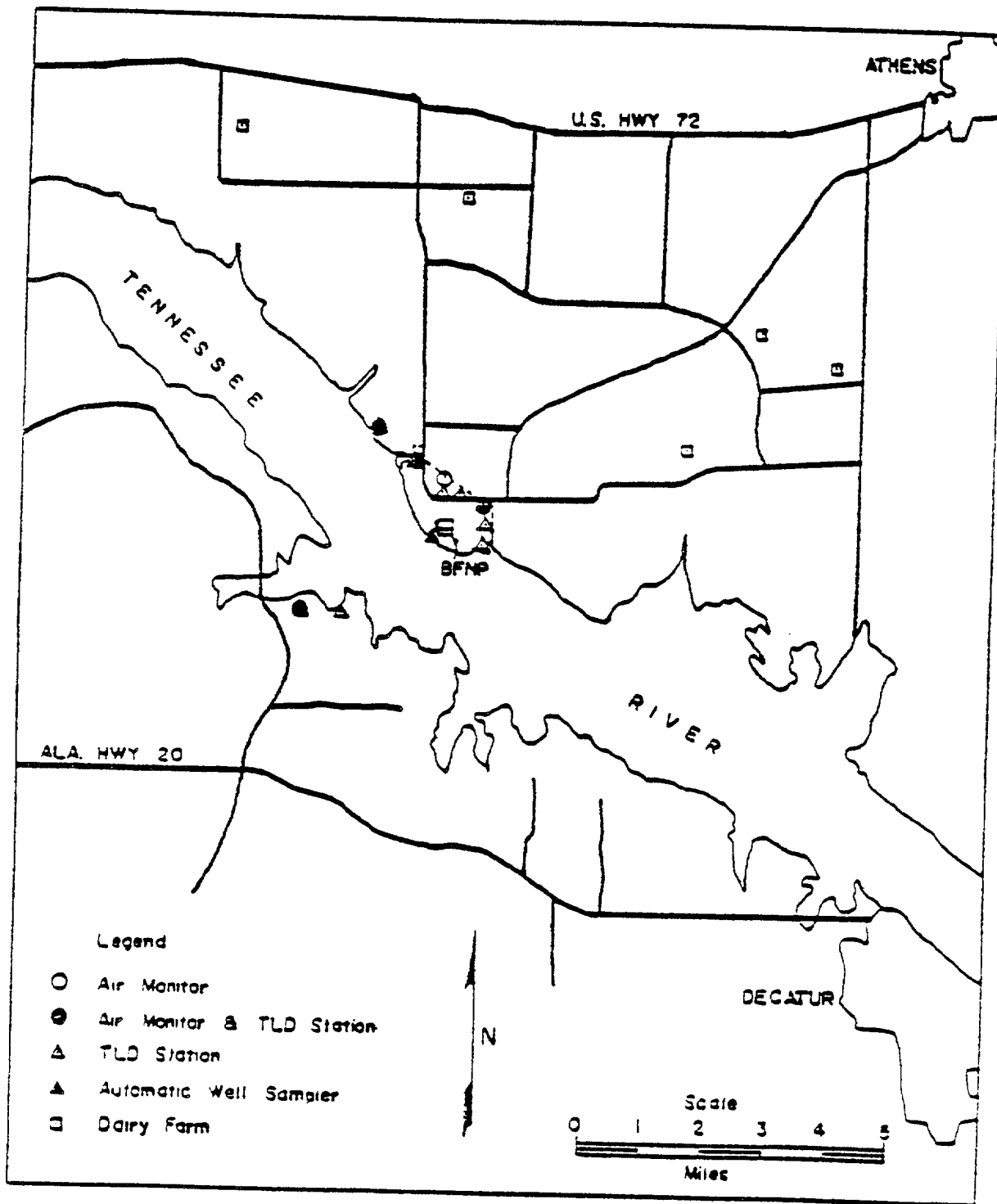
-41-

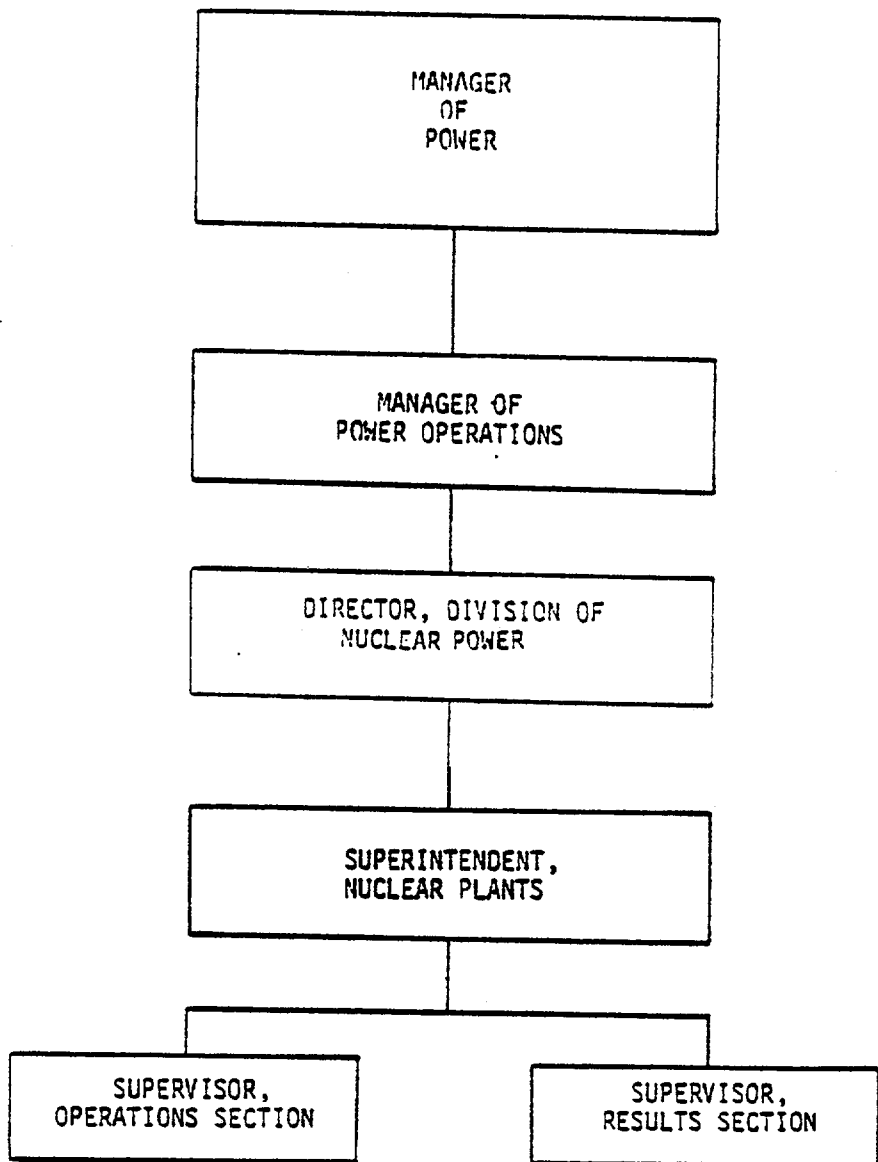
Figure 2.1-1  
deleted

Figure 4.2-1

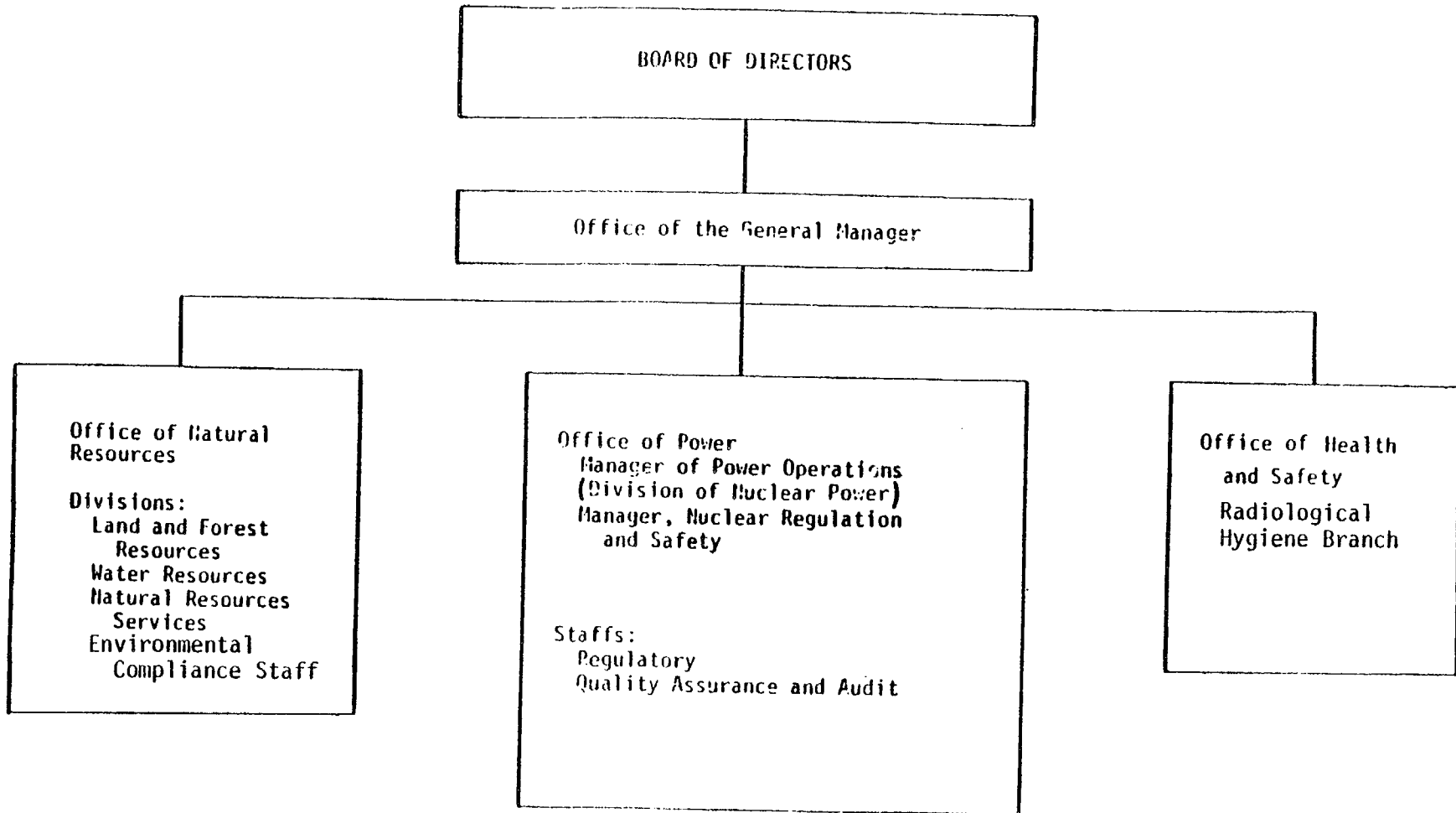
# LOCAL MONITORING STATIONS

## BROWNS FERRY NUCLEAR PLANT





BROWNS FERRY NUCLEAR PLANT  
TVA Office of Power  
Organization for Operation  
of Nuclear Plants  
Figure 5.2-1



**BROWNS FERRY NUCLEAR PLANT**

Offices Directly or Indirectly Involved with Monitoring, Surveillance, or Report Aspects of Environmental Technical Specifications

**Figure 5.2-2**



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-296

BROWNS FERRY NUCLEAR PLANT, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 41  
License No. DPR-68

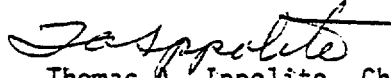
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendments by Tennessee Valley Authority (the licensee) dated August 29, 1979, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C(2) of Facility License No. DPR-68 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 41, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas A. Ippolito, Chief  
Operating Reactors Branch #2  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 6, 1981.

ATTACHMENT TO LICENSE AMENDMENT NO. 41

FACILITY OPERATING LICENSE NO. DPR-68

DOCKET NO. 50-296

Revise Appendix B as follows:

1. Remove the following pages and replace with identically numbered pages:

1/2  
3/4  
5/6  
9/10

23/24  
25/26  
27/28

29/30  
41/42  
45/46

2. The underlined pages are the pages being changed; marginal lines on these pages indicate the area being revised. The overleaf pages are provided for convenience.

## 1.0 DEFINITIONS

The following terms are defined for uniform interpretation of these specifications.

### Administrative Terminology

Environmental limiting condition for operation--any limiting condition for plant operation as stated in Section 2 of the Browns Ferry Nuclear Plant Environmental Technical Specifications.

Unusual event with the potential for a significant environmental impact--an event that results in noncompliance with an environmental technical specification, or an event that results in uncontrolled or unplanned releases of chemical, radioactive, thermal, or other discharges from the Browns Ferry Nuclear Plant in excess of applicable Federal, state, and local regulations.

### Thermal Properties

Thermal limits--limits defined for temperatures, spatial changes in temperature, and temporal changes in temperature within Wheeler Reservoir that are attributable to thermal discharges from Browns Ferry Nuclear Plant.

Intake temperature--the average temperature at a given time within the intake system at a point beyond the intake pumps.

Discharge temperature--the average temperature at a given time in the cooling water return channel or at the condenser outlet butterfly valves.

Delta T ( $\Delta T$ )--the difference in temperatures of the river at the control monitors attributable to thermal discharges from Browns Ferry Nuclear Plant.

### Instrumentation Properties

Accuracy--a measure of the difference between the true and measured values of a given parameter, hence a measure of error.

Minimum detectable level--that level below which a specific detector, instrument, or analysis is unable to detect the presence of a given constituent.

Sensitivity--the minimum change in the variable detected by a given sensor.

2.0 LIMITING CONDITIONS FOR OPERATION

2.1 THERMAL DISCHARGE LIMITS

Page deleted

2.1 Continued

Page deleted

Page deleted

2.2 CHEMICAL

2.2.1 Makeup Water Treatment Plant

Page deleted

2.2 CHEMICAL (continued)

2.2.2 Chlorine

Page deleted

3.1.2 Other Chemicals

Page deleted

### 3.2 Land Management

3.2.1 Power Plant Site - The site shall be appropriately landscaped as allowed by completion of construction. All areas which are either unpaved or not committed for specific purposes will be provided with appropriate vegetative cover.

### 3.2.2 Transmission Line Right-of-Way Maintenance

#### Objective

The sole purpose of this section is to provide reporting requirements (to USNRC) on herbicide usage, if any, for purposes of right-of-way maintenance regarding only those transmission lines under USNRC's jurisdiction for the Browns Ferry Nuclear Plant.

#### Specification

A statement as to whether or not herbicides have been used in maintaining rights of way for those transmission lines associated with the Browns Ferry Nuclear Plant shall be provided. If herbicides have been used, a description of the types, volumes, concentrations, manners and frequencies of application, and miles of right of way that have been treated shall be included.

#### Reporting Requirements

Information as specified above shall be provided in the annual environmental operating report.

#### Basics

Vegetation growth on a transmission line right of way must be controlled in such a manner that it will neither interfere with safe and reliable operation of the line nor impede restoration of service when outages occur. Vegetation growth is controlled by mechanical cutting and the limited use of herbicides. Selected chemicals approved by EPA for use as herbicides are assigned (by EPA) label instructions which provide guidance on and procedures for their use.

### 3.3 Onsite Meteorological Monitoring

The onsite meteorological monitoring program measures and documents meteorological conditions at the site, specifically at heights above ground that allow reasonable estimates of atmospheric dispersion conditions for airborne plant effluents. The onsite program shall conform to the recommendations and intent of Regulatory Guide 1.23, Onsite Meteorological Programs (February 1972), and include instruments to sense wind speed and direction at 10m, 46m, and 91m; to allow calculation of vertical temperature gradient between 10m and 46m and between 10m and 91m; and to measure ambient temperature and dew point at 10m. The location of the meteorological tower is as specified in Section 2.3.7 of the Browns Ferry Nuclear Plant Final Safety Analysis Report (see Amendment 63). A quality assurance program shall be in effect for all meteorological measurements and observations.

## 5.0 ADMINISTRATIVE CONTROLS

### Objective

This section describes the administrative and management controls established to provide continuing protection to the environment and to implement the environmental Technical Specifications. Measures to be specified in this section include the assignment of responsibilities, organizational structure, operating procedures, review and audit functions, and reporting requirements.

### Specifications

#### 5.1 Responsibility

- 5.1.1 The power plant superintendent has responsibility for operating the plant in compliance with these Technical Specifications.
- 5.1.2 The Staff Chief, Environmental Compliance, is responsible for the non-radiological environmental monitoring program outside the plant. The Chief, Radiological Hygiene Branch is responsible for the radiological monitoring program outside the plant.

#### 5.2 Organization

- 5.2.1 The organization of TVA management which directly relates to operation of the plant is shown on Figure 5.2-1.
- 5.2.2 The principal organizations within TVA which are concerned with environmental matters related to nuclear power plant operations are the Office of Power, Office of Natural Resources, and the Office of Health and Safety. The Office of Power is directly responsible for operating the plant in accordance with specified requirements and conducting onsite monitoring. The Office of Natural Resources and the Office of Health and Safety are responsible for providing technical guidance, assistance, monitoring, and other services as needed for environmental compliance. The Environmental Compliance Staff is responsible for independent review and audit of procedures for meeting environmental specifications and limits. The organizations above report to the General Manager as shown in Figure 5.2.2.

#### 5.3 Review and Audit

- 5.3.1 The Environmental Compliance Staff is responsible for independent review and audit of procedures for meeting environmental specifications and limits.
- 5.3.2 The Office of Power Quality Assurance and Audit Staff shall ensure that a periodic audit of the environmental monitoring program is conducted at least once per calendar year.
- 5.3.3 The Office of Power Regulatory Staff conducts an interdisciplinary review of the following items:

- a. Preparation of the proposed environmental Technical Specifications.
- b. Coordination of environmental Technical Specification development with the safety Technical Specifications to avoid conflicts and maintain consistency.
- c. Proposed changes to the Environmental Technical Specifications and the evaluated impact of the change.
- d. Proposed written procedures, as described in Section 5.5 and proposed changes thereto which could significantly affect the plant's environmental impact.
- e. Proposed changes or modifications to plant systems or equipment which could significantly affect the plant's environmental impact and the evaluated impact of the changes.
- f. Results of the environmental monitoring programs prior to their submittal in each Annual Operating Report. See Sections 5.6.1 and 5.6.2.
- g. Reported instances of violations of environmental technical specifications. Where investigation indicates, evaluation and formulation of recommendations to prevent recurrence.

#### 5.4 Action to be Taken if an Environmental LCO is Exceeded

#### 5.5 Procedures

- 5.5.1 Detailed written procedures for the in-plant nonradiological monitoring program, including check-off lists, where applicable, shall be prepared by DNP and approved by the plant superintendent (or his designee) and adhered to.
- 5.5.2 Detailed written procedures for the environmental monitoring program outside the plant, including check-off lists, where applicable, shall be prepared, receive appropriate administrative approval and be adhered to.

A quality control program for the radiological environmental monitoring program has been established with the Alabama Department of Public Health Administration Laboratory and the Environmental Protection Agency, Montgomery, Alabama. Samples of air, water, milk, and vegetation collected around the BFNPP are forwarded to these laboratories for analysis; and results are exchanged for comparison.

An internal quality control program for the radiological environmental monitoring program is being conducted whereby roughly one tenth of all samples are analyzed in duplicate. A quality control program is conducted with the Environmental Protection Agency in Las Vegas in which spiked samples are analyzed and the results compared.

5.5.3 All procedures described in Section 5.5.1 and all changes thereto shall be reviewed and approved prior to implementation and on an annual basis thereafter by the plant management. Temporary changes to procedures which do not change the intent of the original procedure may be made, provided such changes are documented and are approved by two of the following plant personnel:

Superintendent  
Assistant Superintendent  
Operations Supervisor  
Assistant Operations Supervisor  
Shift Engineer

5.6 Reporting Requirements

5.6.1 A report shall be prepared by the Office of Natural Resources and submitted to DNP following the end of each 12-month period of operation, which shall summarize the results of the nonradiological environmental monitoring program.

5.6.2 Routing Reporting

a. A summary report shall be prepared for both the inplant monitoring program and the nonradiological monitoring programs and submitted to the Director of Division of Licensing, NRC, as part of the Annual Operating Report within 120 days after December 31 of each year.

b. Radiological Environmental Monitoring

Routine Reporting

Reporting Requirements:

1. TVA shall prepare a report entitled "Environmental Radioactivity Levels - Browns Ferry Nuclear Plant - Annual Report." The report shall cover the previous 12 months of operation and shall be submitted to the Director of the NRC Region II Office (with a copy to the Director, Office of Nuclear Reactor Regulation) within 120 days after January 1 of each year. The report format shown in Regulatory Guide 4.8 Title 1 shall be used. The report shall include summaries, interpretations, and evaluations of the results of the radiological environmental surveillance activities for the report period, including a comparison with preoperational studies and/or operational controls (as appropriate), and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of irreversible damage are detected by the monitoring, the licensee shall provide an analysis of the problem and a proposed course of action to alleviate the problem.

2. Results of all radiological environmental samples taken shall be summarized and tabulated on an annual basis. In the event that some results are not available within the 120-day period, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

### 5.6.3 Non-Routine Reports

#### a. Radiological

##### Anomalous Measurements

1. If, during any 12-month report period, a measured level of radioactivity in any environmental medium other than those associated with gaseous radiiodine releases exceeds ten times the control station value, a written notification will be submitted within one week advising the NRC of this condition.\* This notification should include an evaluation of any release conditions, environmental factors, or other aspects necessary to explain the anomalous result.
2. If, during any 12-month report period, a measured level of radioactivity in any environmental medium other than those associated with gaseous radiiodine releases exceeds four times the control station value, a written notification will be submitted within 30 days advising the NRC of this condition. This notification should include an evaluation of any release conditions, environmental factors, or other aspects necessary to explain the anomalous result.
3. If individual milk samples show I-131 concentrations of 10 picocuries per liter or greater, a plan shall be submitted within 10 days advising the NRC of the proposed action to ensure the plant related annual doses will be within the design objective of 15 mrem/yr/reactor to the thyroid of any individual.
4. If milk samples collected over a calendar quarter show average concentrations of 6.0 picocuries per liter or greater, a plan shall be submitted within 30 days advising the NRC of the proposed action to ensure the plant-related annual doses will be within the design objective of 15 mrem/yr/reactor to the thyroid of any individual.

\*In the case of a tentatively anomalous value for radiostrontium, a confirmatory reanalysis of the original, a duplicate or a new sample may be desirable. In this instance the results of the confirmatory analysis shall be completed at the earliest time consistent with the analysis, and if the high value is real, the report to the NRC shall be submitted within one week following this analysis.

5. If such levels as discussed in 5.6.3(a)3 and 5.6.3(a)4 can be definitely shown to result from sources other than the Browns Ferry Nuclear Plant, the reporting action called for in 5.6.3(a)3 and 5.6.3(a)4 need not be taken. Justification for assigning high levels of radioactivity to sources other than the Browns Ferry Nuclear Plant must be provided in the annual report.

b. Nonradiological

Violations of the NPDES Permit or the State certification (pursuant to Section 401 of the Clean Water Act) shall be reported to the NRC by submittal of copies of the reports required by the NPDES Permit or certification. Changes and additions to the NPDES Permit or the State certification shall be reported to the NRC within 30 days following the date the change is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

c. Changes

1. Where a change to the plant design, the plant operation, or to procedures is planned which could have a significant adverse effect on the environment or which involves an environmental matter or question not previously reviewed and evaluated by the NRC, a request for the change shall be made to the NRC before implementation.
2. Changes or additions to permits and certificates required for the protection of the environment shall be reported. When the required changes are submitted to the concerned agency for approval, they shall also be submitted to the Director, Division of Licensing, USRNC, for information.
3. Requests for changes in environmental technical specifications shall be submitted to the Director, Division of Licensing, USRNC, for prior review and authorization.

5.7 Environmental Records

5.7.1 Operational information concerning the inplant portion of the environmental technical specifications shall be kept by DNP in a manner convenient for review. This includes plant records and/or logs as indicated below:

- a. Related plant operations
- b. Related maintenance activities
- c.
- d. Updated, corrected, and as-built drawings of the plant

Item (a) through (c) above shall be retained for a period of at least six years and item (d) shall be retained for the life of the plant.

5.7.2 Records and/or logs shall be made and retained in a manner convenient for review. This information concerning the environmental monitoring program is indicated below:

- a. Checks, inspections, tests, and calibration of components and systems.
- b. Principal maintenance activities associated with environmental monitoring equipment and systems.
- c. Results of environmental monitoring surveys related to BFNP.

Items (a) and (b) shall be retained for a period of at least six years and item (c) shall be retained for the life of the plant.

Feb. 3.1.2-1

Sources of Used Chemicals and  
Resulting End Product Chemicals

Page deleted

Table 3.1.2-2

SUMMARY OF CHEMICAL DISCHARGES

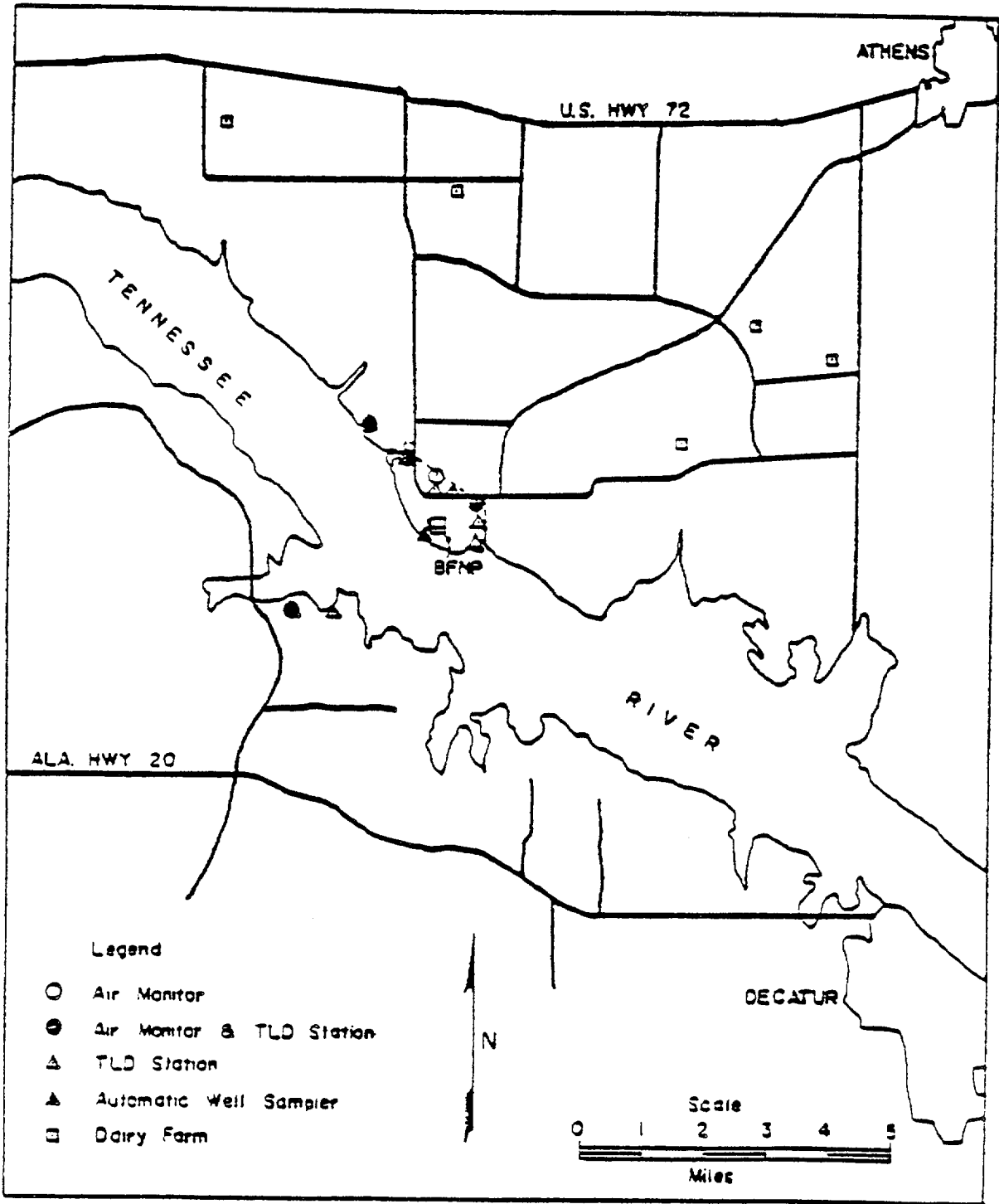
Page deleted

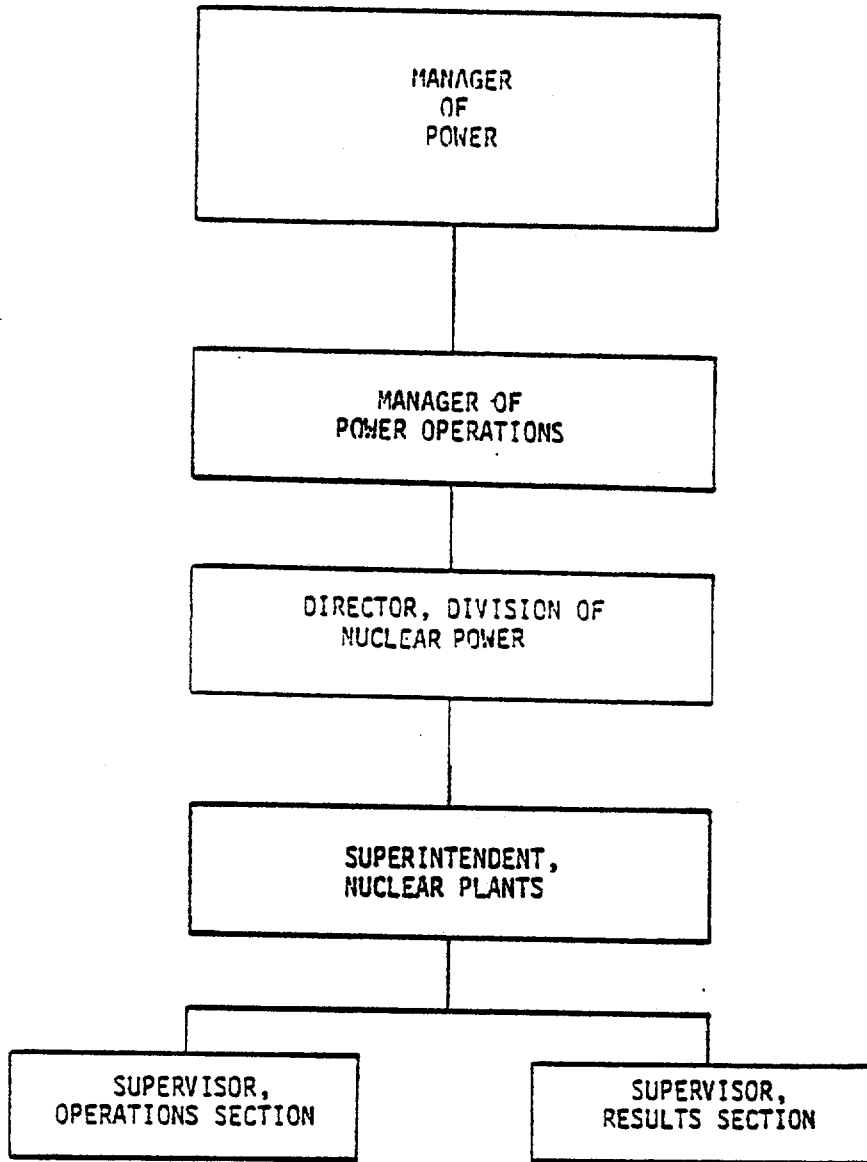
-41-

Figure 2.1-1  
deleted

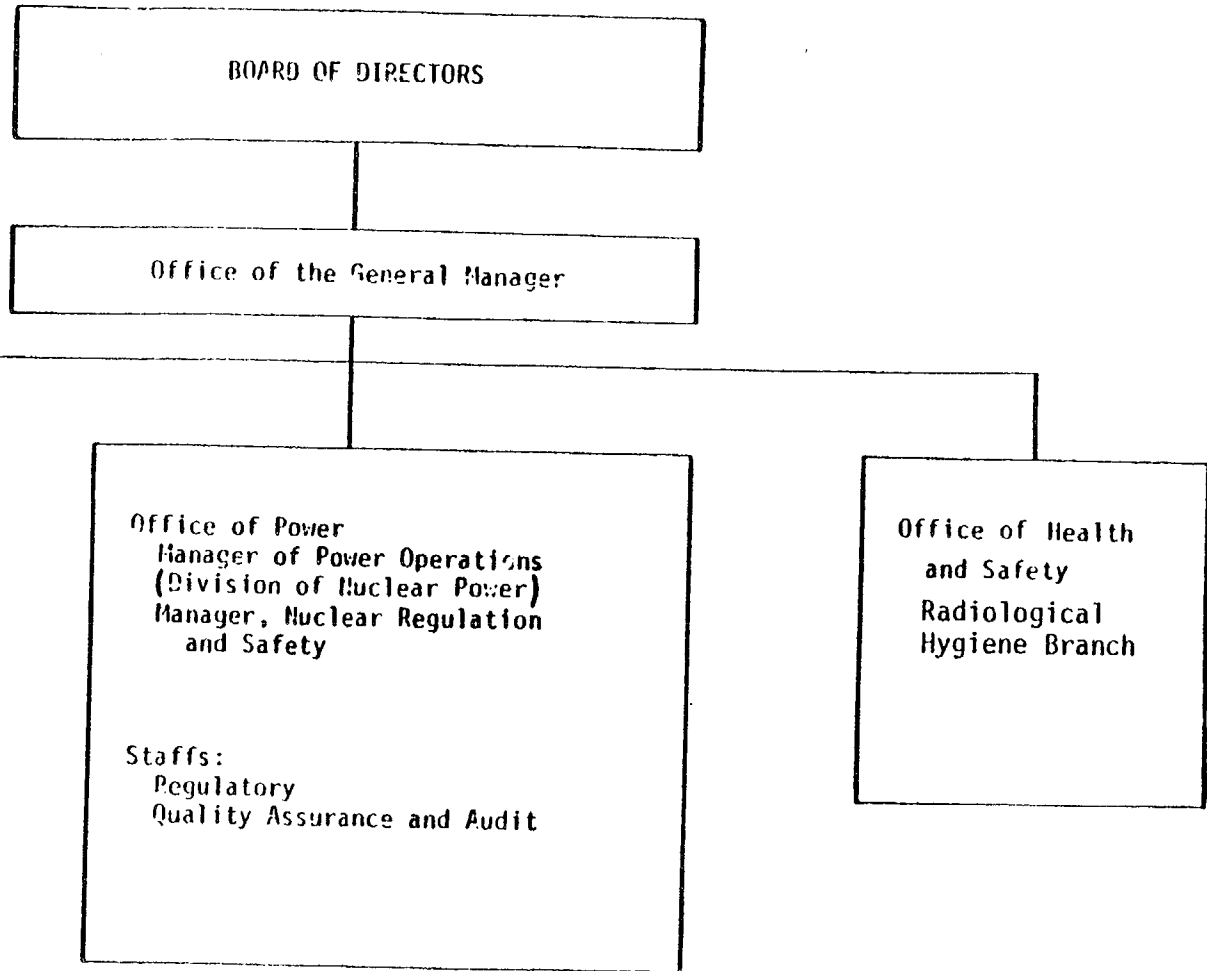
Figure 4.2-1

# LOCAL MONITORING STATIONS BROWNS FERRY NUCLEAR PLANT





BROWNS FERRY NUCLEAR PLANT  
TVA Office of Power  
Organization for Operation  
of Nuclear Plants  
Figure 5.2-1



BROWNS FERRY NUCLEAR PLANT  
Offices Directly or Indirectly Involved with Monitoring, Surveillance, or Permit Aspects of Environmental Technical Specifications  
Figure 5.2-2

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NOS. 50-259, 50-260 AND 50-296TENNESSEE VALLEY AUTHORITYNOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY  
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 69 to Facility Operating License No. DPR-33, Amendment No. 65 to Facility Operating License No. DPR-52 and Amendment No. 41 to Facility Operating License No. DPR-68 issued to Tennessee Valley Authority (the licensee), which revised Technical Specifications for operation of the Browns Ferry Nuclear Plant, Unit Nos. 1, 2 and 3, (the facility) located in Limestone County, Alabama. The amendments are effective as of the date of issuance.

These amendments revise the Environmental Technical Specifications to (1) delete water quality and aquatic monitoring and reporting requirements which duplicate those conditions regulated by the Browns Ferry Nuclear Plant's NPDES Permit No. AL0022080 issued to TVA on June 30, 1977 and (2) change the titles in Section 5.0 (Administrative Controls) for the offices within TVA responsible for environmental activities to reflect recent organizational changes.

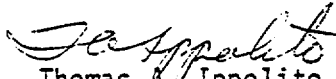
The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

For further details with respect to this action, see (1) the application for amendments dated August 29, 1979, (2) Amendment No. 69 to License No. DPR-33, Amendment No. 65 to License No. DPR-52, and Amendment No. 41 to License No. DPR-68, and (3) the Commission's letter to the licensee dated March 6, 1981. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW., Washington, D. C. and at the Athens Public Library, South and Forrest, Athens, Georgia 30601. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 6th day of March, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Thomas A. Ippolito, Chief  
Operating Reactors Branch #2  
Division of Licensing