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5.0 PERMITS AND APPROVALS

5.1 Introduction and Scope

The major approval action required to permit operation of the Browns Ferry Nuclear Plant (BFN) units to continue after their current operating licenses expire is for the Nuclear Regulatory Commission (NRC) to issue renewed operating licenses for each unit. The current operating licenses for Units 1, 2, and 3 expire at midnight on December 20, 2013, June 28, 2014, and July 2, 2016, respectively. If the NRC approves Tennessee Valley Authority (TVA)'s license renewal application, each unit's renewed license would permit operation for an additional 20-year period beyond these expiration dates.

Most of the equipment involved in the alternatives addressed in this Supplemental Environmental Impact Statement (SEIS) is already in place, having been completed under the various construction and operation permits applicable during initial plant construction approximately 30 years ago. Other than the operating licenses issued by the NRC, no new permits or approvals are required for the potential cooling tower capacity additions, the dry cask storage facility, or the new site worker facilities (Administration Building, Modifications Fabrication Building) considered in this SEIS. However, continued operation will require BFN to maintain the following permits:

- Air Permits (for the Emergency Diesel Generators, Auxiliary Boilers, and Fueling Facility (i.e., the site gasoline pumping station),
- Construction/Demolition Waste Landfill Permit, and
- NPDES Permit

5.2 Overview of Required Permits/Approval

This section provides a brief background discussion and synopsis of the considerations involved for each type of permit or approval required for the alternatives discussed in this SEIS.

5.2.1 Operating License Renewal

5.2.1.1 License Renewal Background

The NRC published 10 CFR Part 54 in December 1991, establishing the regulatory requirements governing nuclear plant license renewal. Since publishing the original license renewal rule (hereinafter referred to as the Rule), the NRC and the industry worked together on the

interpretation and implementation of the requirements of the Rule. These efforts led to an amending of the Rule, with the publication of the amended Rule in May 1995.

Subsequently, the Nuclear Energy Institute (NEI), (an industry-sponsored advocacy organization) embarked on a program to provide more definition and clarity to the process. This program led to the development of the Electric Power Research Institute (EPRI) License Renewal Technical Guidelines. Subsequently NEI published NEI 95-10, "Industry Guidelines for Implementing the Requirements of 10 CFR Part 54 - The License Renewal Rule," to provide the industry with a consistent implementation process for the Rule. The industry used a demonstration program to further verify that the use of this generic guidance document in the development of a license renewal application would satisfy the requirements of the Rule. NRC and industry interaction during and following the demonstration program identified issues requiring additional guidance. In August 1996, the NRC issued a draft regulatory guide DG 1047, endorsing NEI 95-10, revision 0, with specific caveats, as an acceptable basis for preparing a license renewal application. In addition, both the NRC and NEI hosted workshops in October 1996, which provided additional guidance to interested utilities.

To implement the requirements of 10 CFR Part 54, several documents must be prepared for submittal to the NRC. The systems, structures and components within the scope of license renewal and their intended functions that are the basis for their inclusion must be identified. An Integrated Plant Assessment (IPA) to identify applicable passive, long-lived structures and components or commodity groupings must be developed and an aging management review must be performed. Time-Limited Aging Analyses (TLAAs) and exemptions must be evaluated and their applicability must be justified.

5.2.1.2 License Renewal Documentation

There are certain regulatory requirements that must be satisfied in order to obtain a renewed operating license that allows continued operation of a nuclear power plant beyond its original license term. The license renewal application contains general information, technical information, information regarding technical specifications, and environmental information, each of which is addressed below. The application must be filed no earlier than 20 years prior to the expiration of the operating license currently in effect.

General information concerns the plant site and the plant owner, TVA. This includes administrative information similar to the information filed with the original application for an operating license. The required information is specified in 10 CFR 50.33 (a) through (e), (h) and (I). The application must also include conforming changes to the standard indemnity agreement, 10 CFR 140.92, Appendix B, to account for the expiration term of the proposed renewed license.

Technical information includes: (1) the IPA, which is the demonstration that the effects of aging on long-lived, passive structures and components are being adequately managed such that the intended functions are maintained, consistent with the Current Licensing Basis, in the renewal period; (2) the listing of Structures and Components subject to Aging Management Review; (3) results of the Aging Management Review; (4) the listing and evaluation of TLAAs and any exemptions in effect which are based on TLAAs; (5) a supplement to the plant's Final Safety Analysis Report (FSAR),

which contains a summary description of the programs and activities that are cited as managing the effects of aging and the evaluation of TLAAs; and (6) changes to the Current Licensing Basis of the plant.

Information regarding Technical Specifications must include any changes or additions to the plant's technical specifications that are necessary to manage the effects of aging during the period of extended operation.

The license renewal application will contain a supplement or a revision to the original Environmental Report that complies with the requirements of 10 CFR Part 51. This document contains environmental information required by NRC from TVA and which is used by NRC to compose the site-specific supplement to their Generic Environmental Impact Statement for License Renewal of Nuclear Plants. The information comprising this document will largely be excerpted from TVA's National Environmental Policy Act (NEPA) review (i.e., this SEIS).

5.2.2 NPDES Permit

In accordance with the Federal Water Pollution Control Act, the Alabama Water Pollution Control Act, and the Alabama Environmental Management Act, BFN has a permit to discharge various plant effluents into the Tennessee River. This permit, which must be renewed every five years, covers the effluents and discharge points listed in Table 5.2.2-1. The permit specifies discharge limitations and monitoring requirements at each discharge point (Discharge Serial Number). The current permit was issued December 29, 2000, by the Alabama Department of Environmental Management (ADEM); it became effective on February 1, 2001, and will expire January 31, 2006.

5.2.3 Air Pollution Control Permits

BFN has Permits To Operate its three Babcock and Wilcox Auxiliary Boilers (Permit No. 708-0003-Z001) and its eight Emergency Diesel Generators (Permit No. 708-0003-Z002). These permits were jointly issued by the Tri-County District Health Service, Air Pollution Control Program, and the Alabama Air Pollution Control Commission, on October 5, 1978; there is no expiration date.

BFN also has an Air Permit for its Gasoline Dispensing Facility (Permit No. 708-0003-Z003). This permit was issued by the ADEM on August 28, 1995; there is no expiration date.

Table 5.2.2-1 Discharge Points and Effluents of NPDES Permit

Discharge Point	Effluent
Diffuser Outfall (DSN001)	Condenser Circulating Water, Raw Cooling Water, Turbine Building station sump, Liquid Radwaste System effluent, Intake Building sump
DSN005	Residual heat removal service effluent
DSN012	Intake screen backwash
DSN013	Storm water runoff from the Biothermal Facility
DSN013a	Storm water runoff from switchyard drainage ditch
DSN013a(1)	Treated domestic wastewater, medical lab photo developing waste, blowdown from Training Center chiller system, flush water from the Standby Liquid Control System, flush water from cooler/air compressor cleaning, filtered waste from insulator showers (for personnel involved in periodic asbestos stripping and handling operations), and rainwater
DSN013b	Sedimentation pond discharge
DSN014	Storm water runoff from west perimeter drainage ditch
DSN017	Air conditioner condensate and storm water runoff from Training Center and Live Well Center areas
DSN018	Storm water runoff from Materials and Procurement
DSN024	Storm water from the northeast and east permiters (includes adjacent farmland, vehicle service shop and mechanic shop)
DSN019	Storm water from the east side of plant (includes Fire Training Area, Low Level Radwaste storage facility, inert landfill and Hazardous Waste storage area)

5.2.4 Solid Waste Disposal Permit

BFN has a Construction/Demolition Landfill Permit for its solid waste disposal landfill located on the site (Permit No. 42-02, Facility Location: Northwest quarter of the Northwest quarter of Section 18, Township 4 South, Range 5 West, Limestone County). ADEM issued the current permit on March 17, 2000, with an effective date of May 17, 2000, and an expiration date of May 16, 2005. This permit, which must be renewed every five years, allows BFN to dispose of the following materials in its landfill: "Non-hazardous, non-radioactive solid wastes including scrap lumber, bricks, sandblast grit, crushed metal drums, glass, wiring, non-asbestos insulation, roofing materials, building siding, scrap metal, concrete with reinforcing steel, and similar construction and demolition wastes."

The possibility exists that one or more cooling towers might be refurbished or replaced with larger, more efficient cooling towers, in their approximate present locations. To demolish the existing cooling towers, a Notice of Demolition to ADEM would be required and would be initiated by the Environmental staff at BFN. The advance notice requirement is that this written notification must be post marked in the mail at least ten days before the work is actually started. Also, for the cooling towers that contain asbestos, the workers that remove the asbestos panels will also have to be trained and certified by the State of Alabama in asbestos regulation compliance.

5.3 New Permits and Approvals Not Required, Not Applicable, or Indirectly Applicable

5.3.1 Land Use

The Farmland Protection Policy Act directs federal agencies to identify and take into account the adverse effects of federal programs on the preservation of farmland. The Act requires that Form AD 1006, "Farmland Conversion Impact Rating," be completed with assistance from the USDA-NRCS if prime farmland is to be permanently converted to nonagricultural use as a result of a proposed federal action.

As a federal agency, TVA is not subject to state or local zoning requirements. Land use impacts are assessed in this SEIS. Because the new structures and relocated spoils associated with the SEIS Alternatives would be located on previously disturbed soils and the plant site is classified as built-up land, their associated impacts would be insignificant.

5.3.2 Wetlands

If wetland determinations indicate that "jurisdictional" wetlands would be modified or significantly altered to accommodate development of the proposed project, requisite permits must be obtained from both the U. S. Army Corps of Engineers (USACE) and the Alabama Department of Environmental Monitoring. Wetlands are also subject to Executive Order 11990 (Protection of Wetlands).

It is unlikely that any activity associated with the SEIS Alternatives, including the footprint of either the project facilities or related appurtenances, will affect jurisdictional wetlands.

5.3.3 Floodplains

Executive Order 11988 (Floodplain Management) requires flood hazard assessments of proposed activities and requires consideration of alternatives for actions that would occur within a floodplain or floodway. TVA has conducted a class review of certain repetitive actions that occur in floodplains. See 46 Fed. Reg. 22845 (1981). The use of measures to minimize floodplains impacts as identified in TVA's 1981 class review would ensure that the floodplains are not adversely impacted by these repetitive actions.

All changes to site facilities associated with the SEIS alternatives would be located above the Probable Maximum Flood. Therefore, no identification of preferable options or determination of "no practicable alternative" per Executive Order (EO) 11988 is required.

5.3.4 Biological

Alabama has a list of protected species that overlap and extend beyond those protected by the federal Endangered Species Act (ESA). Potential impacts on state listed species are considered in this SEIS. In addition, per Section 7 of the ESA, a more structured consultation process with the U. S. Fish and Wildlife Service (USFWS) may be required if a “may affect” situation exists. The Fish and Wildlife Coordination Act also requires that aquatic species be considered in project planning and would be a requirement of the USACE and state permitting processes. The USFWS usually combines both consultative processes.

There are no impacts to endangered or threatened species that would result from any actions associated with the alternatives being considered in this SEIS. Therefore, no further reviews by state or federal agencies are required.

5.3.5 Cultural Resources

All federal agencies are mandated under the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resources Protection Act (ARPA) of 1979 to protect significant archaeological resources and historic properties located on TVA lands or affected by undertakings. In response to this federal legislation, TVA conducts surveys to record historic properties. A historic property is “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places.”

As discussed in Section 4.3.18.1, a Phase II archaeological survey will be required if the site identified in Area 1 (see Figure 2.2-7) cannot be avoided by either Alternative 1 or Alternative 2 activities.

5.3.6 Air Navigation

Coordination with the Federal Aviation Administration (FAA) is required when it becomes necessary to ensure that the highest structures associated with the project do not impair the safety of aviation. Submission of a letter of notification (with accompanying maps and project description) to the FAA would result in a written response from the FAA certifying that no hazard exists or recommending project changes and/or the installation of warning devices such as lighting.

The BFN site facilities elevation is dominated by the 600-foot high Off-Gas Stack, which has quadrant strobe lights near the top and constant red warning lights mid-way up the stack. No new structures associated with the Alternatives in this SEIS would be as high as or higher than existing structures; therefore, no new notifications to the FAA are required.

5.3.7 Noise

Noise impacts and mitigation plans are addressed in this SEIS. Although federal regulations apply to only certain pieces of construction equipment, any local regulatory requirements on noise would have to be considered and met. However, no applicable local noise ordinances were identified for Limestone County.

5.3.8 Emergency Planning and Community Right-to-Know

The proposed plant notification and reporting under the Emergency Planning and Community Right-to-Know Act (EPCRA) goes into effect when the plant becomes operational rather than as a preconstruction process. Provisions of EPCRA flow down to designated Alabama and local officials and to the managers of the plant itself. Being a federal agency, TVA is not subject to EPCRA; however, as a matter of policy and consistent with EO 12856, TVA complies with EPCRA to the same extent as other utilities.

5.3.9 Health and Safety

The federal Occupational Safety and Health Administration (OSHA) governs the occupational safety and health of the construction workers and the operational staffs. As a federal agency, TVA is not directly subject to regulation from OSHA; however, it must comply with OSHA's substantive requirements, as these are incorporated in its occupational health and safety practices. Contractors would continue to be subject to these substantive requirements.