



Tennessee Valley Authority, 1101 Market Street, LP 5A, Chattanooga, Tennessee 37402-2801

August 10, 2009

10 CFR 50.54 (a)  
10 CFR 50.55 (f)

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

In the Matter of )  
Tennessee Valley Authority )

Docket No. 50-438 and 50-439

TENNESSEE VALLEY AUTHORITY (TVA) - BELLEFONTE NUCLEAR PLANT (BLN)  
UNITS 1 (CPPR-122) AND 2 (CPPR-123) - TRANSITION TO DEFERRED STATUS

- References:
- 1) Letter from A. Bhatnagar (TVA) to Eric Leeds (NRC) dated August 26, 2008, Bellefonte Nuclear Plant Units 1 and 2-Request to Reinstate Construction Permits CPPR-122 (Unit 1) and CPPR-123 (Unit 2).
  - 2) Letter from L. Raghavan (NRC) to A. Bhatnagar (TVA), Bellefonte Nuclear Plant, Units 1 and 2-Order Granting Reinstatement of Construction Permits Nos. CPPR-122 and CPPR-123 (TAC Nos. MD9564 and MD9565, dated March 9, 2009.
  - 3) Letter from Masoud Bajestani (TVA) to NRC, TVA Implementation of the NRC Order Granting Reinstatement of Construction Permits Nos. CPPR-122 and CPPR-123, dated May 12, 2009.

In response to TVA's request for the reinstatement of the BLN Construction Permits for Units 1 (CPPR-122) and 2 (CPPR-123) (Reference 1), NRC issued an Order (Reference 2) granting reinstatement of the BLN Construction Permits returning the facility to a "terminated plant" status under Section III.B of the Commission's Policy Statement on Deferred Plants (52 FR 38077, October 14, 1987). Shortly thereafter, TVA acknowledged the NRC's reinstatement of the Construction Permits stating that TVA had placed the units in terminated status and that TVA had revised its Nuclear Quality Assurance Plan (NQAP) to address that fact (Reference 3). In Reference 3, TVA also committed to address the elements of the Commission's Policy Statement that applied to plants in deferred status and to transition to such status as soon as practicable.

The purpose of this letter is to confirm that TVA has established the necessary programs, policies and procedures to warrant BLN 1&2 being placed in deferred status consistent with the Policy Statement.

TVA's Bellefonte plant is located near Scottsboro, Alabama, and consists of two substantially complete Babcock and Wilcox pressurized water reactors. BLN Units 1&2 were first placed in the deferred status in 1988 and were actively maintained in that status prior to the withdrawal of the Construction Permits in 2006. Up to the time of withdrawal, NRC performed periodic inspections of the preservation and maintenance program activities and documented the results in inspection reports, indicating that the preservation and maintenance activities were being performed in an acceptable manner. During active construction and through the period of construction deferral, the Bellefonte site successfully maintained a high rating under the NRC's Systematic Assessment of Licensee Performance (SALP) Program, and the BLN construction project was specifically excluded in the September 1985 letter issued to TVA under 10 CFR 50.54(f).

Before TVA requested that NRC reinstate the Construction Permits, TVA began assessing the deferred plant programs and procedures as well as the preservation and maintenance activities that were in place while the BLN units were deferred. With this baseline of work and considering lessons-learned from the Watts Bar Unit 2 deferred plant program, TVA has developed and implemented the set of programs and procedures deemed appropriate for application to BLN Units 1&2 in deferred status. Since reinstatement of the Construction Permits in March 2009, TVA has resumed preservation and maintenance activities aimed at protecting selected plant assets. Work performed during the deferral period will support such preservation and maintenance activities and at no time during such period will work be performed which would further plant construction or completion.

TVA has examined the provisions of the Deferred Plant Policy and has addressed each of its elements to ensure continued compliance. For instance, TVA will make certain that the current Construction Permits will not expire. The expiration dates for Construction Permit Nos. CPPR-122 and CPPR-123 are October 1, 2011, and October 1, 2014, respectively. In accordance with Section III.A.2 of the Policy Statement, TVA will make a timely request for renewal of the permits in accordance with NRC's regulations.

In accordance with Section III.A.3 of the Deferred Plant Policy, TVA has established the necessary programs and procedures to maintain and preserve equipment as well as to retain and protect plant records. As mentioned above, TVA has instituted a quality assurance program under 10 CFR Part 50, Appendix B, commensurate with the level of activities at a deferred plant. Also, NRC Regulatory Guides endorsing the ANSI N45.2 series of standards, "Quality Assurance Requirements for Nuclear Power Plants," are applicable to plants under construction including Regulatory Guides 1.28, 1.37, 1.38,

1.58, 1.88 and 1.118. The Enclosure to this letter addresses with greater specificity the elements of Section III.A.3 as they apply to BLN 1&2 in deferred plant status.

TVA recognizes the need to address the lapse in quality assurance oversight that occurred in the period from withdrawal of the Construction Permits through March 2009 when the NQAP was reestablished as described above. TVA has identified the key impacts to be addressed and has entered them into the BLN Corrective Action Program. TVA's current NQAP addresses those elements of the Deferred Plant Policy applicable to BLN, as well as the regulatory requirements that continue to apply to plants in the deferred status. TVA has also implemented work process controls to prevent construction-related activities from being conducted until the provisions of the policy regarding resumption of construction have been successfully addressed.

TVA also reviewed the new regulatory requirements that have been issued since the June 1988 deferral through July 2009. No new regulatory requirements were deemed applicable to BLN which would affect activities to be undertaken during the period of deferral.

During the deferral period and consistent with the licensing process being used at Watts Bar Unit 2, TVA plans to develop and submit a BLN Units 1&2 Key Assumptions letter for NRC's review and consideration. This Key Assumptions letter will formally document the initial licensing basis for the BLN Units based on the findings of the original BLN Construction Permits and the consideration of applicable new regulations.

As TVA stated in Reference 1, any future decision to resume BLN construction activities would require approval by the TVA Board of Directors. Should TVA decide to move forward with completion activities, it would follow the notice of resumption of construction activities included in the Deferred Plant Policy. This would include submitting a letter notifying the NRC Director of Nuclear Reactor Regulation a minimum of 120 days in advance of the intent to resume construction, along with the other information listed in Section III.A.6 of the policy.

In the event of such a decision to move forward with construction, TVA will develop a detailed Regulatory Framework for BLN 1&2. This will include review of previously issued Generic Letters, Bulletins, Circulars, and Information Notices for applicability and appropriate disposition. The Regulatory Framework would also contain a review of new standards, guidance and regulation for applicability to BLN, and review of previous commitments and open items related to licensing. NRC's formal license review would follow TVA's submittal of an updated Operating License application, including an amendment to the Bellefonte Units 1&2 Final Safety Analysis Report (FSAR) and an updated Environmental Report. NRC's review of the Operating License application would be expected to include, among other things, a review of the Probable Maximum Flood (PMF) calculation for the Bellefonte site.

TVA understands if a decision is made to begin construction, the NRC staff will thereafter also determine the acceptability of structures, systems, and components (SSCs) important to safety under 10 CFR Part 50, Appendix A. TVA recognizes that the limited activities performed while the plant is in deferred status, as well as NRC inspections performed during that period, will be utilized to determine the acceptability of SSCs important to safety. At the appropriate time, TVA intends to develop programs for BLN 1&2 similar to those that are being implemented at Watts Bar Unit 2 for the configuration control process and the corresponding programs to evaluate, refurbish, restore or replace SSCs.

Efforts to transition BLN Units 1&2 to deferred plant status do not affect, in any way, TVA's ability or current plans to pursue a Combined License for BLN Units 3&4 under 10 CFR Part 52, and the licensing information submitted to the NRC for the purpose of supporting the Combined License Application remains valid. The transition to deferred plant status has always been considered as a necessary step in TVA's assessment of the viability of BLN Units 1&2 as a baseload generation option. Should TVA decide to reactivate construction in the future, TVA will address the resulting impacts on the BLN Unit 3&4 Combined License Application.

In Reference 1, TVA described the Environmental Assessment which it conducted in connection with its request for reinstatement of the BLN Units 1&2 Construction Permits and returning the plant to deferred status. TVA concluded that the limited consequences of reinstating the Construction Permits in deferred status would not have a significant effect on the quality of the human environment. The NRC Staff prepared an "Environmental Assessment and Finding of No Significant Impact" (74 FR 9308, March 3, 2009) in which it determined that reinstating the Construction Permits and placing the facility in terminated status will not have a significant impact on the environment. TVA has reconfirmed that the limited activities to be conducted during the deferral period remain bounded by the limited impacts to the environment described in the NRC's Environmental Assessment.

TVA has identified those Federal, State and local license and permit requirements that are applicable to the BLN Units 1&2 in deferred status. TVA confirmed that the applicable licenses and permits remain current and that renewal processes are being included in the integrated project schedule.

In conclusion, TVA has taken the necessary actions to address those elements of the Commission's Policy Statement for Deferred Plants to allow BLN 1&2 to be placed in deferred status. In order to confirm compliance with the policy, TVA performed a multi-level readiness assessment which included internal and external reviews by nuclear Quality Assurance and licensing experts, as well as a formal TVA Nuclear Quality

U. S. Nuclear Regulatory Commission  
Page 5  
August 10, 2009

Assurance Audit performed in accordance with TVA NQAP requirements. The results of these assessments are documented and any necessary follow-up actions are being addressed under the BLN Corrective Action Program. In accordance with the NRC's Order reinstating the Construction Permits, TVA respectfully requests that NRC authorize placement of BLN Units 1&2 in deferred plant status.

If you have questions or require additional information, please do not hesitate to contact Andrea Sterdis, Manager, Nuclear Generation Development and Construction Licensing. Andrea can be reached via email at [andreasterdis@tva.gov](mailto:andreasterdis@tva.gov) or by phone at 423-751-7119.



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Enclosure  
cc: See page 8

**ENCLOSURE**  
**BELLEFONTE NUCLEAR POWER PLANT UNITS 1 AND 2**  
**TRANSITION TO DEFERRED STATUS**

In accordance with NRC's Policy Statement on Deferred Plants, TVA has addressed the elements of the policy which apply to the maintenance and preservation of equipment as well as the retention and protection of plant records at BLN Units 1&2. (Section III.A.3)

TVA has implemented a Quality Assurance Program that complies with the applicable requirements of 10 CFR 50, Appendix B for BLN Units 1&2 as documented in Appendix G of the TVA Nuclear Quality Assurance Program (NQAP). TVA has also established an organization and management team that is well qualified and experienced to carry out their responsibilities for site activities. The management team includes a Project Director (who reports directly to the Vice President of Nuclear Generation Development) and experienced, senior managers within the disciplines of engineering, training, construction, licensing, project controls and nuclear operations. In addition, a Project Nuclear Assurance Manager has been appointed and reports to the General Manager for Nuclear Generation Development and Construction Oversight. In accordance with 10 CFR Appendix B and the TVA NQAP, the Bellefonte Nuclear Assurance Manager is independent of the Bellefonte Project Management organization.

Under the terms of the Bellefonte Quality Assurance Program, necessary programs and procedures have been re-established and implemented to address the maintenance, preservation, and documentation of equipment provisions of the Deferred Plant Policy as they apply to deferral-related activities that are being performed at the site. These activities include the following:

- Preventative maintenance and layup activities are being performed under established programs and procedures which limit physical work on plant systems, structures and components (SSCs) as appropriate. Controls preventing active construction activities are in place.
- Asset preservation activities are being performed under established programs and procedures which limit physical work on plant SSCs to that which is necessary for maintenance and preservation of plant assets. Controls preventing active construction activities are in place.
- Plant documentation is preserved and maintained under records control programs which include physical security, access, change management and environmental controls.
- A Corrective Action Program has been established which describes processes and responsibilities for documenting and resolving problems, including conditions adverse to quality and significant conditions adverse to quality, pertaining to site activities in the deferred plant status. The BLN Corrective Action Program meets the requirements of the TVA NQAP and is similar to the programs implemented at the TVA operating units and at Watts Bar 2.

- Prompt identification, documentation, evaluation, and correction of adverse conditions, including the reporting requirements of 10 CFR 21, 10 CFR 50.55(e) and 10 CFR 50.71 are addressed through re-established reportability programs. Initial screening of deficiencies for reportability is performed as part of the Problem Evaluation Report initiation process within the Corrective Action Program.
- Housekeeping, equipment protection and materials handling activities are performed in a manner consistent with standards contained in ANSI N45.2 per the commitments in the TVA NQAP. Housekeeping activities include the inspections, initiation of corrective actions, and documentation and assignment of responsibilities for general housekeeping in plant areas used for the performance of work activities which could affect nuclear quality. Site programs and procedures also define the requirements and establish controls for the storage and handling of materials received at the BLN site.
- A security program has been established which provides protective measures to prevent unauthorized intrusion as well as the positive control of materials and equipment at the BLN site.
- TVA has developed a plan for resolving hardware and records issues resulting from the lapse in QA oversight during the period when the Construction Permits were withdrawn and TVA began an investment recovery program. The construction status for BLN Units 1&2 at the time that the Construction Permits were withdrawn was documented in the plant's Engineering, Construction, Monitoring and Documentation (ECM&D) Database. Prior to Construction Permit withdrawal, the construction status, including documentation, was controlled under the NQAP and was the subject of successful TVA Nuclear Quality Assurance Audits and NRC inspections. In 2008, and after investment recovery activities were halted, TVA began construction status verification activities in order to identify and document deviations from the previously established construction status. These verification activities focused on the impacts of the investment recovery program and included detailed engineering walk downs and documentation of the affected areas. To consolidate the resulting documentation changes, the ECM&D database is currently being updated.
- TVA has planned additional activities to address plant-wide configuration control as well as the re-establishment of required design qualifications for plant SSCs. Detailed system walk downs will be conducted to verify and document plant configuration plant SSCs. The programs that are being developed are similar to those that are being implemented at Watts Bar Unit 2 for configuration control as well as to evaluate, refurbish, restore or replace SSCs.

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U. S. Nuclear Regulatory Commission

Page 9

August 10, 2009

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