UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 13, 2012

Mr. Michael D. Skaggs
Senior Vice President
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Tennessee Valley Authority
6A Lookout Place
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SUBJECT: BELLEFONTE NUCLEAR PLANT, UNITS 1 AND 2 – INITIAL REVIEW COMMENTS REGARDING THE REVISED QUALITY VERIFICATION PROGRAM (TAC NOS. ME8665 AND ME8666)

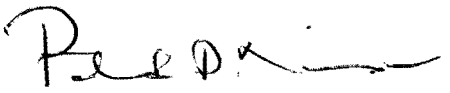
Dear Mr. Skaggs:

By letter dated June 7, 2012, Tennessee Valley Authority (TVA) submitted its revised Quality Verification Program (QVP) for Bellefonte Nuclear Plant (BLN), Units 1 and 2. The original version of the QVP was submitted to the U.S. Nuclear Regulatory Commission (NRC) on April 1, 2011. TVA revised the QVP to provide additional details on the program elements.

The NRC staff has completed an initial review of the revised QVP with an emphasis on understanding the overall objectives, functional elements and tasks, the desired outcome, and criteria for successful accomplishment. In this regard, the staff has prepared the enclosed comments and questions to better understand the program. The staff proposes to use these comments and questions as a tool to facilitate a public meeting with TVA on the QVP in late July or August 2012. TVA does not need to address these comments and questions at this time. After the public meeting, the NRC staff will determine if further clarifications need to be incorporated into the QVP.

If you have any questions, please feel free to contact me either at (301) 415-1457 or by e-mail at Patrick.Milano@nrc.gov. Upon agreement between the NRC and TVA staffs on the schedule for a meeting, the NRC will issue a meeting notice.

Sincerely,



Patrick D. Milano, Senior Project Manager
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Docket Nos. 50-438 and 50-439

Enclosure: Staff Comments on QVP

cc w/encl: See next page

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BELLEFONTE NUCLEAR PLANT

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NUCLEAR REGULATORY COMMISSION

COMMENTS AND QUESTIONS ASSESSMENT

REGARDING REVISED QUALITY VERIFICATION PROGRAM

TENNESSEE VALLEY AUTHORITY

BELLEFONTE NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-438 AND 50-439

Section 1.0 Background and Quality Verification Program (QVP) Overview

1. In the discussion about activities during the period after construction permit (CP) withdrawal at Bellefonte Nuclear Plant (BLN), there is no discussion about the suspension of design and licensing engineering. These activities generally ceased after Tennessee Valley Authority (TVA) had earlier announced the deferral of the project. The Commission Policy Statement on Deferred Plants discusses the conduct of review during deferral by the Nuclear Regulatory Commission (NRC) staff (Section III.4). In this regard, the Policy Statement indicates that post-CP and operating license reviews and associated documentation is brought to an appropriate termination point. The QVP should discuss how TVA handled the design and licensing termination and how the cessation of quality assurance (QA) may have affected these activities.

2. As was done at Watts Bar Nuclear Plant (WBN), TVA gradually reduced the level of effort applied to preservation and maintenance during the period of deferral, which preceded the period of QA suspension. If this approach was also taken at BLN, the potential for physical degradation may have started earlier than 2006 and may affect decisions regarding selection of components for inspection.

3. Although TVA has previously assessed its QA Program (QAP) for implementation at BLN, there should be a discussion about the assessment of the expanded activities under the QVP and the associated expansion of the QAP to cover these activities.

4. TVA states that the QVP provides a methodology, basis, and procedures to enable decisions to replace or refurbish systems, structures, and components (SSC). What about decisions to rework or repair deficiencies found by the QVP?

5. Throughout the QVP, TVA defines "design baseline documents" as those plant and vendor drawings that define the physical configuration of the SSCs and the QA records associated with them. Does this include design and field changes that have yet to be implemented? As TVA works to recover its design baseline, it must recognize that any alterations of the design specified in the CP requires the CP to be amended.

Section 2.0 Overall Strategy

1. Will appropriate or new regulatory requirements and guidance, industry operating experience, and vendor information be made part of the design baseline? Or, is the overall QVP strategy to re-establish the design baseline to the as-left design configuration from the time that the design activities ceased?

2. How will the overall adequacy (quality, completeness) of the design baseline documentation be determined? Does this include the supporting QA and quality control (QC) records?

3. It would be helpful to describe how the elements of the QVP are sequenced as a project. It should also be consistent with the description in Section 3.0, "Element of the QVP and Specific Objectives."

4. The Commission Policy Statement discusses the acceptability of SSCs upon reactivation from deferred status by determining from the results of baseline inspections that quality and performance requirements have not been significantly reduced from those specified in the final safety analysis report (FSAR). Because preservation and maintenance were not consistently implemented, the QVP should address how it would determine whether any SSCs require special NRC attention during future reactivation.

5. In addition to refurbishment of equipment, the elements of the QVP include inspections and evaluations to define those that will either be classified as use-as-is or needing repair/rework.

Section 3.0 Elements of the QVP and Specific Objectives

1. It would be clearer if the overall mission (e.g., what TVA wants to accomplish) of the QVP was presented, then followed with the general discussion of each functional element as it addresses the accomplishment objectives.

2. Because each functional element has its own section of the QVP, it is confusing as to whether this section is describing objectives of the QVP or objectives of the elements.

Section 4.0 QA Records Verification

1. What are the acceptance criteria for determining that the QA records are complete?

2. Does this element re-establish the as-left (then current) design and licensing basis for the facility?

3. The Description of Program Activities states that there are three criteria to be satisfied to ensure the adequacy of records. It then states that the Design Baseline Verification (DBV) will address the criterion/attribute of technical accuracy. If so, why is "technical accuracy" an objective of the QA Records Verification?

4. There is a discussion about reconstituting missing inspection and non-inspection records. However, will the finding be included in the Corrective Action Program? Does TVA expect to handle the resolution of records deficiencies under the QA Records Verification element?

5. TVA mentions that the disposition for records problems will be consistent with the QA Records Program used at WBN Unit 1. It is not clear how the WBN program is being used.

6. It is not clear why the discussion of design significant issues is included in the Records Verification section. This appears to be a design review function.

Section 5.0 Design Baseline Verification (DBV)

1. This section does not describe how the design and licensing was left after both the earlier deferral and cessation of the project.

2. The DBV relies on the design baseline documentation to assess: (1) the status of the as-found plant configuration (status of construction), (2) the impacts on the status of construction from the investment recovery activities, (3) the impacts of investment recovery on the as-left design, (4) the adequacy and completeness of the design, as supported by the design-basis calculations, (5) the accuracy of the as-constructed design drawings, including the impact of design changes and field modifications/changes on the design, (6) the need for the NRC to take special considerations, (7) the adequacy and completeness of post-construction inspections and tests, and (8) the accuracy of the as-built versus as-designed. As such, the DBV utilizes and continues to build from the results from the QA Records Review.

3. Describe in more detail the functions of the Engineering Construction, Monitoring and Documentation process and database; especially as it ties the DBV to the Engineering System Design Package development process.

4. There is no discussion in this section about the role of the corrective action program in the DBV process.

5. The TVA QA Program was not reinstated until March 2009. However, the Initial Configuration Recovery Effort performed by a TVA contractor began in September 2008. How did TVA ensure the quality of this effort? This section does not describe the acceptance criteria used and the training requirements. Are the results of this effort being used to meet any of the DBV functions and objectives?

6. TVA should consider providing an introduction that describes the purpose, rationale, and interrelationships between the multiple walkdowns and inspections. Objectives are discussed in Section 5.2 on General System and Building Walkdowns. If these also apply to the other walkdowns and inspections, it should be clearer about the functions that are used to accomplish or meet the objectives and how the results are documented and used.

7. The section on General System and Building Walkdowns includes a discussion about the Engineering Systems Design Package Process. Should this discussion be included in Section 8.0 on QVP interfaces?

8. There is mention about collateral damage from investment recovery activities. The potential for some damage to the remaining portion of an SSC could include the affect from inadequate piping and equipment support. How is this identified and evaluated?

9. Describe the acceptance criteria that are being used to determine if the various objectives are met. Where are these criteria documented?

10. There is a statement that key aspects of the Walkdown Procedure for General Walkdown Requirements are reinforced through specific training. Are there any qualification requirements for individuals conducting walkdowns and inspections?

11. In the section on Detailed Walkdowns for Investment Recovery Zones, it states that the TVA identified areas affected by investment recovery, as shown on investment recovery walkdown drawings. Was this done under the Initial Configuration Recovery Effort? Also, the boundaries for the zones of influence are defined in these walkdowns. Describe the process/program, including functions and objectives, for development of the drawings used as an input into the detailed walkdowns.

12. Regarding the Walkdown Procedure for Investment Recovery Zones, are there acceptance criteria that coincide with the discipline-specific attributes?

13. The Detailed Walkdowns for Verification of As-Built Attributes are performed to verify as-built engineering attributes. What is the purpose or reason for conducting a reconciliation of the construction against design? Because the results will be used in subsequent engineering evaluations, what training and quality oversight will be used to ensure proper design and configuration control?

14. During the Detailed Refurbishment Inspections, the inspection of passive components will be done on a sample basis. What is the approach for active components?

15. What is the purpose of a subsection on Design Calculations within the DBV section? This section describes the design control for engineering calculations, including development of new and revised calculations.

16. What is the purpose of the discussion on Configuration Management After Walkdowns? Is this part of the Engineering System Design Package Development process?

17. What is the purpose of the discussion on Licensing Basis? Is this part of the Engineering System Design Package Development process? However, the Commission Policy Statement on Deferred Plants states that the results of baseline inspections are done to indicate whether quality and performance requirements have been significantly reduced from those specified in the FSAR. Also, it states that SSCs that fail to meet the acceptance criteria or will not meet current NRC requirements will be dealt with on a case-by-case basis. These areas are not addressed in the Licensing Basis section.

18. Will the results from the DBV be evaluated for impacts on the previously completed Code data reports? If so, under what program will it be completed?

Section 6.0 Replacement Items Verification

1. Do the procedures for conducting walkdowns and inspections consider the identification of unqualified components and parts that may have been installed? In particular, will these activities determine if unqualified items were installed but not documented?

2. If unqualified items are found, will the installation be documented under the controls described in the procedure for Control of Temporary Installations or Omissions? Will the finding be included in the Corrective Action Program?

Section 7.0 Refurbishment Program

1. Detailed refurbishment inspections and the program procedure are discussed under the DBV section. Why is the process repeated?

2. Rather than assuring that a component can function as designed, do the inspection and evaluation activities only determine that the component meets its design and procurement specifications?

Section 8.0 QVP Interfaces

1. This section is attempting to describe how the QVP elements fit into the engineering design process. TVA should consider adjusting the focus to more of a summary/wrap-up, with a discussion of the objectives and how each was met.

2. Based on the focus of this section, the information flow diagram should be adjusted to show a more clearly identify the product inputs into the design process.

Section 9.0 Closure Criteria

1. Describe what the successful completion of each element of the QVP will be based.

2. NRC acceptance of the program plan is not a basis for closure.

3. The overall program does not address the interface with the nuclear underwriter.

Section 10.0 Corrective Action Program

1. During the discussions of each program element, there were statements about issues being handled by various procedures. How will the performance of these procedures interface with the Corrective Action Program?

Section 11.0 Preservation and Preventive Maintenance

1. It is recognized that preservation and maintenance activities will be re-established to maintain the validity of the results and conclusions stemming from the QVP. However, an assessment of the past implementation of preservation and preventive maintenance will be a consideration into the degree of inspection and testing that will be done under the QVP.

If you have any questions, please feel free to contact me either at (301) 415-1457 or by e-mail at Patrick.Milano@nrc.gov. Upon agreement between the NRC and TVA staffs on the schedule for a meeting, the NRC will issue a meeting notice.

Sincerely,

/RA/

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