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Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402-2801

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

January 11, 2010

Secretary
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
ATTN: Rulemakings and Adjudications Staff

Subject: Comments Regarding Proposed Revisions for Renewal of Nuclear Power Plant Operating Licenses

The Nuclear Regulatory Commission (NRC) published a proposed rule change and associated changes to guidance documents related to environmental reviews for renewal of nuclear power plant operating licenses for public comment in the Federal Register on July 31, 2009 (74 FR 38117-38140). In response to this Federal Register notice, the Tennessee Valley Authority (TVA) has reviewed the following.

1. Proposed Changes to 10 CFR 51, Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions
2. NUREG-1437, Revision 1, Generic Environmental Impact Statement (GEIS) for License Renewal of Nuclear Power Plants (Draft Report for Comment)
3. Proposed Revision 1 of Regulatory Guide 4.2, Supplement 1, Preparation of Environmental Reports for Nuclear Power Plant License Renewal Applications
4. NUREG-1555, Supplement 1, Revision 1, Standard Review Plans for Environmental Reviews for Nuclear Power Plants (ESRP) (Draft Report for Comment)

TVA appreciates NRC's effort to further develop generic environmental review requirements and guidance for nuclear plant license renewal. The proposed revisions to the GEIS, Regulatory Guide 4.2, and the ESRP will support the TVA efforts to comply with the National Environmental Policy Act when preparing applications for license renewals at the TVA nuclear plants. We appreciate the opportunity to review and provide comments on these proposed revisions to the requirements and the associated guidance documents.

Based on our review, following specific comments on the proposed revisions are provided for consideration.

Air Quality Impacts

In the proposed rule and the proposed GEIS revision, NRC recognizes that impacts to air quality from continued operations and refurbishment activities associated with the license renewal are expected to be small but nonetheless classifies this impact as a Category 2 issue. While activities near or in an air quality nonattainment area may be of some concern, this reason alone does not justify requiring a plant-specific analysis (i.e., a Category 2 analysis) for all license renewals. Rather, TVA recommends that certain threshold criteria be used to make the finding whether the air quality impact belongs to Category 1 or 2. One readily available criterion is whether the refurbishment or other activities associated with the renewal would require the facility to obtain a non-attainment new source review (NSR) permit under the Clean Air Act. Under such a criterion, a facility with a synthetic minor permit or one that would continue to operate under the parameters specified in the facility's existing Title V permit should be presumed to create an air quality impact that is a Category 1 issue.

Surface Water and Groundwater Impacts

To determine whether a facility's surface or groundwater use would pose any conflicts, NRC maintains the threshold of whether the plant's cooling towers or cooling ponds use make-up water from a river with "low flow." The proposed rule (74 FR 38182) continues to set this "low flow" threshold at an *annual flow rate [that] is less than 3.15×10^{12} ft³/year (9×10^{10} m³/year).*

TVA recommends that the proposed rule: (1) clarify the meaning of the term "annual flow rate" and (2) provide the basis for the threshold flow of " 3.15×10^{12} ft³/year." As to the former, the annual flow should be an appropriate statistical value, perhaps the mean annual value. In regard to the latter, TVA believes that the trigger for requiring an assessment of the impact of the proposed action on the flow should be linked to a statistical property of the source waterbody at the location of the plant. For example, the rule could set this trigger at a mean annual flow that is in excess of *d* percent of the mean annual flow of the river, where *d* is a meaningfully defined instream and riparian ecological standard for the source waterbody. While defining an appropriate ecological standard for the source waterbody would require a systematic evaluation, the use of such a rigorous standard would provide a far more objective trigger than a "one size fits all" number, such as 3.15×10^{12} ft³/year.

Aquatic Resource Impacts (Thermal)

In the proposed rule and the proposed GEIS revision, NRC continues to utilize a plant's use of a "once-through cooling system or cooling pond" as the sole criterion for determining whether the plant's thermal impact would be a Category 2 issue. TVA believes that the National Pollutant Discharge Elimination System (NPDES) permitting authority's determination that the thermal limits under which the plant discharges its effluent are sufficient to maintain a "balanced indigenous population of fish, shellfish and wildlife" (i.e., the "BIP standard" under Section 316(a) of the Clean Water Act) in the receiving waterbody is a much better index of the magnitude of any

thermal impacts. Accordingly, we suggest that the thermal impact of a plant that uses a once-through cooling system be considered a Category 2 issue unless the plant operates under NPDES permit limitations that ensure that the "BIP standard" is met. For example, the existence of a valid Clean Water Act Section 316(a) determination at the time of license renewal should be a sufficient basis to downgrade the aquatic impact to a Category 1 issue.

Aquatic Resource Impacts (Impingement and Entrainment)

In the proposed rule and the proposed GEIS revision, the NRC continues to utilize a plant's use of a "once-through cooling system or cooling pond" as the sole criterion for determining whether the plant's entrainment and impingement impact would be a Category 2 issue. TVA believes that the NPDES permitting authority's determination that the design and location of a plant's cooling water intake structure reflects "best technology available" (BTA) to minimize "adverse environmental impacts," is a much better index of the magnitude of any entrainment and impingement impacts. Accordingly, we suggest that the entrainment and impingement impacts of a plant that uses a once-through cooling system be considered a Class 2 issue unless the plant operates under NPDES permit limitations that require the use of BTA to minimize such impacts. For example, the existence of a valid BTA determination under Clean Water Act Section 316(b), at the time of license renewal, should be a sufficient basis to downgrade the aquatic impact to a Category 1 issue.

Impact to Threatened, Endangered, and Protected Species and Essential Fish Habitat

In the proposed rule and the proposed GEIS revision, the NRC continues to classify this as a Category 2 issue regardless of the incremental impact of the license renewal activities on threatened, endangered, and protected species and essential fish habitat. TVA recommends that activities associated with license renewal should be considered a Category 2 issue only if the proponent determines such activities could adversely affect federally listed species or designated critical habitat, in which case these activities would be subject to the formal consultation requirements under Section 7 of the Endangered Species Act, and to the requirement that a plant-specific analysis be included in the licensee's environmental report.

Impact to Historic and Cultural Resources

In the proposed rule and the proposed GEIS revision, NRC classifies this as a Category 2 issue regardless of the incremental impact of the license renewal activities on historic and cultural resources. TVA believes that it is the excavation and installation associated with construction activity that has the potential to impact historic resources. The continued operation of a plant through license renewal is unlikely to impact historic resources. Therefore, TVA recommends that activities associated with license renewal should be considered a Category 2 issue only if the activities would adversely impact a historic property listed on or eligible for listing on the National Register of Historic Places. In the event of such an adverse effect, these activities would be subject to the requirement under Section 106 of the National Historic Preservation Act to mitigate the adverse impact, and to the requirement that a plant-specific analysis be included in the licensee's environmental report.

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If you have any questions or need additional information, please contact Amy Henry
(TVA NEPA Compliance) at (865) 632-4045.

Respectfully,

A handwritten signature in black ink, appearing to read "R. M. Krich". The signature is written in a cursive style with a large initial "R" and a long, sweeping underline.

R. M. Krich
Vice President
Nuclear Licensing