

U.S. NUCLEAR REGULATORY COMMISSION

TENNESSEE VALLEY AUTHORITY

WATTS BAR NUCLEAR PLANT

ISSUANCE OF DIRECTOR'S DECISION UNDER 10 CFR 2.206

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION
William T. Russell, Director

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| In the Matter of |) | |
| |) | |
| Tennessee Valley Authority (TVA) |) | Docket No. 50-390 |
| (Watts Bar Nuclear Plant) |) | (10 CFR 2.206) |

FINAL DIRECTOR'S DECISION UNDER 10 CFR 2.206

I. INTRODUCTION

On February 14, 1996, Ms. Faith Young (Petitioner) of Dixon Springs, Tennessee, submitted a letter requesting that the U.S. Nuclear Regulatory Commission (NRC), among other things, rescind the operating license of Watts Bar Nuclear Plant (WBNP). The Petitioner's concern, as stated in her February 14 letter, is as follows:

"Watts Bar lake water which cools Watts Bar nuclear plant's radioactive core holds sediment contaminated by radioactive material. Over a lifetime of Watts Bar nuclear plant operation uncontrolled access to this lake will disturb its sediment, in turn contaminating water drawn into the nuclear cooling system. This heightened radioactive contamination of nuclear plant emission has not been previously addressed. No action is being considered to restrict lake use or to remove radioactive material. This "record of decision" by Department of Energy, Environmental Protection Agency, U. S. Army Corps of Engineers, state of Tennessee and Tennessee Valley Authority appears in an interagency document dated September, 1995."

Since the document referred to by Ms. Young ("Record of Decision for the Lower Watts Bar Reservoir," DOE/OR/02-1373&D3, dated September 1995, hereinafter, the "Department of Energy (DOE) report") clearly addresses Lower Watts Bar Reservoir (LWBR), the staff has assumed, for purposes of this Decision, that the "Watts Bar lake" in Ms. Young's letter refers to the Lower Watts Bar

Reservoir. On March 27, 1996, the staff formally notified Ms. Young that her Petition was being evaluated pursuant to 10 CFR 2.206.

II. DISCUSSION

The DOE report presents the selected remedial action being used to address the contamination of the LWBR "Operable Unit (OU)." The report attributes LWBR contamination to past activities at the DOE's Oak Ridge Reservation (ORR) and other non-DOE sources. The boundaries of the LWBR, as defined in the DOE report, extend from the Watts Bar Dam at Tennessee River Mile (TRM) 529.9 on the Tennessee River, upstream to TRM 567.5 at the confluence of the Clinch and Tennessee Rivers. The DOE report, on page 2-2, discusses the selection of the Watts Bar Dam as the downstream boundary as follows:

"The downstream boundary of the ORR was placed at Watts Bar Dam because earlier studies had shown that the vast majority of sediment-associated contaminants released from ORR had collected in lower Watts Bar Reservoir. Consequently, concentrations of sediment-associated contaminants released from ORR are much lower in reservoirs downstream of Watts Bar Dam. The level of Oak Ridge-derived contaminants detected in past studies in the Tennessee River system below the Watts Bar Dam were well below the concentrations determined to be of human health concerns by the baseline risk assessment within the Watts Bar Reservoir."

WBNP is located approximately 1.9 river miles downstream from the Watts Bar Dam on the west bank of the Chickamauga Lake. Chickamauga Lake is the next lake downstream from the LWBR and is bounded by the Chickamauga Dam approximately 57 miles downstream from WBNP. The intake and discharge for cooling water to WBNP are located 1.9 or more river miles downstream from the Watts Bar Dam. Accordingly, it must be noted that WBNP is located outside and below the boundary of the area considered by the DOE report. Therefore, since

WBNP does not draw cooling water from within the boundary of the LWBR and does not discharge cooling water into the boundary of the LWBR, the operation of WBNP will have no effect on the sediment in the LWBR and, accordingly, will not cause contaminated sediment to be drawn into WBNP.

The Petitioner's understanding that the LWBR holds sediment contaminated by radioactive material is consistent with the DOE report (see page 2-2) and with information in the NRC staff's "Final Environmental Statement Related to the Operation of Watts Bar Nuclear Plant, Units 1 and 2," (FES) NUREG-0498, Supplement 1, Section 2.5, April 1995. The NRC staff stated therein that "Operations at the Oak Ridge Reservation have historically resulted in the release of radionuclides to the aquatic environment.... Most of the releases occurred during the 1950s and have declined since." The NRC staff concluded in the FES, Supplement 1, that there are no significant changes in environmental impacts as a result of changes in plant design, procedures or proposed methods of plant operation, or changes in the environment.

By contrast, the Petitioner's claim that "no action is being considered to restrict lake use or to remove radioactive material" is not consistent with the DOE report. The DOE report's "Statement of Basis and Purpose" (page 2-2) states that the report "presents the selected remedial action for the LWBR OU." The "Description of Selected Remedy" (page 2-2) and "The Selected Remedy" (page 2-10) describe the selected remedy as the "continuance of existing controls and advisories regarding LWBR activities" and the "Monitoring Plan." The DOE report (page 2-9) also notes that "The state of Tennessee and other federal agencies are already implementing the main components of the preferred alternative." With respect to the removal of radioactive sediments, the DOE report (page 2-9) states that "The cost of the

preferred alternative is much lower and a more effective use of funds when compared to active remediation of sediments." In other words, a remedy has been developed for the contamination in the LWBR and the purpose of the DOE report is to present that remedy.

Notwithstanding the conclusion that operation of WBNP will not disturb the sediment in the upstream LWBR, the WBNP Technical Specifications (TS) and the associated Offsite Dose Calculation Manual require programs and controls for the control of radioactive effluents from the plant itself. Such controls include limitations on the concentrations of radioactive material released in liquid effluents from the plant. The staff evaluated control of radioactive effluents by WBNP in Section 11 of NUREG-0847, "Safety Evaluation Report related to the operation of Watts Bar Nuclear Plant, Units 1 and 2." The staff concluded therein that WBNP meets applicable regulations (10 CFR 20.1302; 10 CFR Part 50, Appendix A, General Design Criteria 60, 63, and 64) and other guidance documents and is therefore acceptable for operation.

The NRC staff's review did not substantiate the Petitioner's assertions. The Petitioner did not offer information that indicated any need to revisit the staff's previous evaluations.

III. CONCLUSION

For the reasons given above, Petitioner's request to rescind the operating license of the WBNP is denied. As explained above, the NRC staff concludes that the Petitioner has not raised any substantial health and safety issues as the staff believes that there is no appreciable threat to the public health and safety presented by WBNP's effluent water. Accordingly, the

Petitioner's request for action pursuant to 10 CFR 2.206, as specifically stated in the letter of February 14, 1996, is denied.

A copy of this Final Director's Decision will be filed with the Secretary of the Commission for the Commission's review in accordance with 10 CFR 2.206(c). This Decision will become the final action of the Commission 25 days after issuance unless the Commission, on its own motion, institutes review of the Decision within that time.

FOR THE NUCLEAR REGULATORY COMMISSION



William T. Russell, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 9th day of July 1996.