UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
230 PEACHTREE STREET, N.W. SUITE 818
ATLANTA, GEORGIA 30303

Central File
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In Reply Refer To:
RII:WWP
50-390/78-4
50-391/78-3

Tennessee Valley Authority
Attn: Mr. N. B. Hughes
Manager of Power
830 Power Building
Chattanooga, Tennessee 37401

Gentlemen:

This refers to the inspection conducted by Mr. W. W. Peery of this office on February 7-9, 1978, of activities authorized by NRC Construction Permit Nos. CPPR-91 and CPPR-92 for the Watts Bar 1 and 2 facilities, and to the discussion of our findings held with Mr. J. F. Groves at the conclusion of the inspection.

Areas examined during the inspection and our findings are discussed in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

Within the scope of this inspection, no items of noncompliance were disclosed.

Three new unresolved items resulted from this inspection and is discussed in the enclosed report. These items will be examined during subsequent inspections.

In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must include a full statement of the reasons on the basis of which it is claimed that the information is proprietary, and should be prepared so that proprietary information identified in the application is contained in a separate part of the document. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

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Should you have any questions concerning this letter, we will be glad to discuss them with you.

Sincerely,

Jack T. Sutherland, Chief
Fuel Facility and Materials
Safety Branch

Enclosure: Inspection Report Nos.
50-390/78-4 and 50-391/78-3

cc w/encl:
Mr. J. E. Gilleland
Assistant Manager of Power
830 Power Building
Chattanooga, Tennessee 37401

Mr. T. B. Northern, Jr.
Project Manager
Watts Bar Nuclear Plant
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Spring City, Tennessee 37381

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Knoxville, Tennessee 37902

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
230 PEACHTREE STREET, N.W. SUITE 1217
ATLANTA, GEORGIA 30303

Report Nos.: 50-390/78-4 and 50-391/78-4

Docket Nos.: 50-390 and 50-391

License No.: CPPR-91 and CPPR-92

Licensee: Tennessee Valley Authority
830 Power Building
Chattanooga, Tennessee 37401

Facility Name: Watts Bar Nuclear Plant 1 and 2

Inspection at: Watts Bar Nuclear Plant, Spring City, Tennessee

Inspection conducted: February 7-9, 1978

Inspector: W. W. Peery

Reviewed by: J. W. Hufham 3/10/78
J. W. Hufham, Chief Date
Environmental and Special Projects Section
Fuel Facility and Materials Safety Branch

Inspection Summary

Inspection on February 7-9, 1978 (Report Nos. 50-390/78-4 and 50-391/78-3)
Areas Inspected: Radiological environmental monitoring program including management controls; inspection of environmental monitoring stations; review of environmental monitoring data, analytical sensitivity for radiological environmental samples and quality control measures; review of radiological environmental monitoring procedures. The inspection involved 20 inspector-hours on site by one inspector.
Results: For the six areas inspected, no items of noncompliance or deviations were identified.

DETAILS I Prepared by: W. W. Peery 3/10/78
W. W. Peery, Radiation Specialist Date
Environmental and Special Projects Section
Fuel Facility and Materials Safety Branch

Dates of Inspection: February 7-10, 1978

Reviewed by: J. W. Hufham 3/10/78
J. W. Hufham, Chief Date
Environmental and Special Projects Section
Fuel Facility and Materials Safety Branch

1. Person Contacted

*J. F. Groves, Plant Superintendent
*C. Hampleman, Health Physics Supervisor
R. C. Wallace, Special Projects Staff (Muscle Shoals, Alabama)
C. Hewlett, Data Branch, (Kingston, Tennessee)

*Denotes those present during the exit interview.

2. Licensee Action on Previous Inspection Findings

None pending, initial inspection.

3. Unresolved Items

a. Unresolved Item 78-4/1

The Division of Environmental Planning and Radiological Hygiene Branch, Environmental Radiological Monitoring Manual, QA Procedure, entitled "Sampling Environmental Media," Section ENV.-3, Pg. 2, states in part, Air particulates - 5" x 5" section of HV-70 filter paper is positioned around filter holder and secured with a small strip of masking tape and two O-rings. During inspection of all of the Watts Bar air particulate environmental monitoring stations, the inspector observed at one station (PM-4) that there was no masking tape or O-rings on the filter and the filter was completely off the holder and lying near the bottom of the cabinet. At other monitoring stations, the inspector observed an opening in the filter near the taped area and this station and others had only one or no O-rings. The O-rings observed by the inspector at several stations appeared to be deteriorated to the extent that an effective seal may not have been formed around the filter paper. A licensee representative from the licensee's Division of Environmental Planning, Radiological Hygiene Branch, Muscle Shoals, Alabama stated that corrective actions

would be taken promptly for the above items and confirmed to the inspector by telephone on February 14, 1978, that the corrective measures had in fact been instituted. In addition, a licensee representative at Watts Bar Nuclear Plant informed the inspector that corrective measures for the above items would be pursued. He also informed the inspector by telephone on February 14, 1978, that he had reached an understanding with a licensee representative of the Division of Environmental Planning, Muscle Shoals, that corrective action was in fact being taken.

b. Unresolved Item 78-4/2

Flow calibrations of the Watts Bar environmental air monitoring stations would be performed by the Data Branch in Kingston, Tennessee. Licensee representatives in the Data Branch informed the inspector that flow calibrations had not yet been performed on the Watts Bar air monitoring stations. They stated that flow calibration equipment had been ordered and that the calibrations would be performed as soon as the equipment is received. They also stated that should unduly long delays in receipt of the equipment occur, they would borrow the equipment form some other TVA facility and perform the flow calibrations in a timely way.

c. Unresolved Item 78-4/3

A licensee representative from Muscle Shoals stated that an audit of the Watts Bar radiological environmental monitoring program had not been performed. He said that an audit is scheduled for March 1978. The inspector pointed out to Watts Bar and Muscle Shoals representatives that Section 16.A.5.3 of the Watts Bar Environmental Technical Specifications will require annual audits. A Watts Bar representative stated that he had reached an understanding with Muscle Shoals personnel that the audit will in fact be performed as scheduled.

4. Management Controls

a. Responsibility has been assigned to specific organizations and individuals to conduct the Watts Bar radiological environmental monitoring program.

b. Provision is being made for auditing the environmental monitoring program; however, no audit had been conducted at the time of this inspection. (See paragraph 3.c)

c. The licensee has procedures and systems for recording the results of audits and reporting the results to supervision and management.

d. The licensee has no contracted services in the environmental monitoring program.

The provisions for the above items are contained in the licensee's Environmental Statement, Page 2.4-31, Page 2.4-32, Page 2.4-40; FSAR, Appendix A, Environmental Technical Specification, Section 16.A.3.2 through 16.A.5 and the PSAR, Page 2.10-2.

5. Licensee Program for Quality Control of Analytical Measurements

a. The licensee has established a quality control program for analytical measurements at the Muscle Shoals laboratory. The licensee's program for QC of analytical measurements has been an ongoing program in relation to the analysis of environmental samples from the Browns Ferry Nuclear Plant and the Sequoyah Nuclear Plant. Duplicate and spiked samples are analyzed and comparative analyses have been made with EPA and the State of Tennessee. (See Rpt. Nos. 50-259/77-4, 50-260/77-4 and 50-296/77-4 BFNP and 50-327/76-5)

6. Implementation of Preoperational Environmental Monitoring Programs

a. The Watts Bar preoperational radiological environmental monitoring program is described in Construction Permit CPPR-91, paragraph 2.c, Page 29, paragraph 42, Radiation Monitoring of the Hearing Record; PSAR, Tables 2.10-1, 2.10-2, 2.10-3 and Figures 2-10-1 and 2-10-2; Environmental Statement, Tables 2.4-4, 2.4-5 and 2.4-6; FSAR, Section 16A.3.2, Radiological Environmental Monitoring.

b. The inspector inspected all of the licensee's Watts Bar Radiological environmental monitoring air particulate, charcoal filter, TLD, rainwater, and gum paper fallout stations and found all stations located and equipped as described. Locations of other sampling media such as milk and vegetation relative to the Watts Bar Plant were inspected. All of the air particulate and charcoal filter station equipment appeared to be functioning properly and maintained in reasonably good condition. A principal problem observed involved the placement of the air particulate filters on the holders as described in paragraph 3.a. above.

c. The inspector reviewed some representative sample analyses data for air particulate, charcoal filters, rainwater and well water and it appeared that sampling commitments are being met.

d. The licensee has not been required to submit any reports for the radiological environmental monitoring program.

e. A licensee representative stated that the Watts Bar data has not been reviewed for trend or bias identification and plotting. He stated that the review is planned for the near future. The inspector pointed out to Watts Bar representatives and Muscle Shoals representatives that the results of current sample analyses and the results of the trend plots should be provided to the Watts Bar Plant. Both representatives agreed. The inspector informed them that this item would be reviewed on a subsequent inspection.

7. Exit Interview

The inspector met with licensee representatives (as shown in paragraph 1) at the conclusion of the inspection on February 10, 1978 at Watts Bar Nuclear Plant. The inspector summarized the scope and findings of the inspection.