



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30303

Report Nos.: 50-518/78-12, 50-519/78-12, 50-520/78-12 and 50-521/78-12

Docket Nos.: 50-518, 50-519, 50-520 and 50-521

License Nos.: CPPR-150, CPPR-151, CPPR-152 and CPPR-153

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

Facility Name: Hartsville Nuclear Plant, Units A1, B1, A2 and B2

Inspection at: Hartsville Nuclear Plant
Hartsville, Tennessee

401 Building
Chattanooga, Tennessee

Inspection conducted: October 3-5, 1978

Inspector: A. L. Cunningham

Reviewed by:

J. W. Hufham
J. W. Hufham, Chief
Environmental and Special Projects Section
Fuel Facility and Materials Safety Branch

11/21/78
Date

Inspection Summary

Inspection on October 35, 1978 (Report Nos. 50-518/78-12, 50-519/78-12, 50-520/78-12 and 50-521/78-12)

Areas Inspected: Routine announced inspection of environmental protection requirement including administrative controls; environmental protection program review; construction effects monitoring; review of previous enforcement items. Inspection involved 20 inspectorhours onsite by one NRC inspector.

Results: Of the four areas inspected, one apparent item of noncompliance was identified in one area (deficiency: construction effects monitoring - paragraph 6.a.).

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DETAILS I

Prepared by:

A. L. Cunningham
A. L. Cunningham, Environmental
Scientist, Environmental and
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Fuel Facility and Materials Safety
Branch

11/21/78
Date

Dates of Inspection: October 3-5, 1978

Reviewed by:

J. W. Huffman
J. W. Huffman, Chief
Environmental and Special Projects
Section
Fuel Facility and Materials Safety
Branch

11/21/78
Date

All information in the following Details applies equally to Units 1A,
1B, 2A and 2B.

1. Individuals Contacted

R. T. Hathcote, Project Manager
R. L. Teasley, Jr., Construction Superintendent, Plant A
L. A. Wilson, General Construction Superintendent
W. O. Brown, Assistant Construction Engineer
G. A. Gonsalves, Supervisor, Site Quality Assurance Unit
N. L. McCrory, Technical Services Supervisor
*S. Tate, Environmental Engineer
D. M. Egan, Environmental Engineer
*R. H. Shell, Supervisor, Environmental Planning Section,
Regulatory Staff
*B. A. Brye, Environmental Engineer
*R. M. Bittman, Environmental Engineer
*C. L. McIntyre, Environmental Engineer
J. L. Day, Engineer (General Electric), Quality Assurance
R. Andrews, Engineering Aide

*Denotes those attending the Exit Interview.

2. Licensee Action on Previous Findings

(Closed) Noncompliance (50- 518/77-5-1, 519/77-5-1, 520/77-5-1,
521/77-5-1): Multispectral aerial photography. The terrestrial
surveillance program requiring periodic multispectral aerial photo-

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graphy was revised in accordance with Amendment 3 to the Environmental Report. The subject requirement was deleted from the Construction Permits.

(Closed) Noncompliance (50-518/77-8-2 519/77-8-2, 520/77-8-2, 521/77-8-2) Adverse impact of construction activity. Dry batch plant which generated excessive dust was removed from service.

(Closed) Noncompliance (50-518/77-8-3, 519/77-8-3, 520/77-8-3, 521/77-8-3) Implementation of corrective actions in response to management audit findings. Inspector confirmed that adequate corrective actions were implemented. Responses to audit findings are given required priority.

3. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. The unresolved item (518/78-12-2, 519/78-12-2, 520/78-12-2, 521/78-12-2) disclosed during inspection is discussed in paragraph 5.C.

4. Administrative Controls

- a. Section 3.2(7) of the Construction Permits requires the licensee to establish a control program which includes written procedures and instructions for control of all construction activities as prescribed, and to provide for periodic management audits that determine the adequacy of implementation of environmental conditions. The licensee is also required to maintain sufficient records to furnish evidence of compliance with all environmental conditions defined in the Permits. The inspector reviewed organizational responsibility for implementation of environmental protection, surveillance, construction effects monitoring, and preoperational studies. Detailed discussions with the site environmental engineer and cognizant personnel from the Division of Environmental Planning, disclosed that program management and responsibilities appeared consistent with Construction Permit requirements and accepted industry practice.
- b. The inspector reviewed detailed written procedures developed to assure implementation of plant site environmental protection requirements. The following procedures were included: (1) non-radioactive solid waste management; (2) point source discharge management (e.g., construction runoff and drainage, mixing plant discharge, sanitary wastes); (3) water quality management; (4) air quality management; (5) construction impact management (e.g., vehicular traffic, noise, endangered species and critical habitat protection). Each procedure assigned specific management

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and implementation responsibilities and listed all pertinent procedural criteria. Procedures were also inspected with respect to revisions and required review and approval.

- c. The inspector reviewed the annual management audit report dated July 20, 1978. Inspection revealed that all audit findings were acknowledged and mitigating actions implemented as required. There were no questions regarding this item.

5. Environmental Protection Program Review

- a. The inspector reviewed the status of the on-site environmental control program. The review included an audit of field data, quarterly and monthly reports, plant site inspection, and discussions with cognizant licensee personnel. Elements of the program selected for review included erosion and runoff control, solid waste disposal, construction effects monitoring, air quality management, storage and management of fuels, lubricants and hazardous materials. Site inspection included tours of all spoil storage and borrow areas, waste water holding ponds, fuel, lubricant and chemical storage areas, concrete batch plants, sewage treatment facility, barge slip, and the oil spill equipment storage building.
- b. Inspection of the two concrete batch plants included management and control of dust and emissions liquid effluents released to the East holding pond. Inspection disclosed that during routine operation of No. 1 batch plant, heavy, localized dust emission was generated. Such emissions were confined to the cement charging phase of plant operation. This finding discussed with licensee representatives. The inspector informed licensee representatives that the above finding constituted an unresolved item (518/78-12-01, 519/78-12-1, 520/78-12-1, 521/78-12-01). Licensee representatives were reminded that their environmental procedure HNP-FEP (Rev. 1) - Air Quality Management, §§ 6.2.1 and 6.2.2 provided for adequate dust control and periodic inspection of the mixing plants to ensure dust abatement. Although dust emissions were generally confined to the area of batch plant No. 1, the volume of dust was considered sufficiently significant to require mitigating action. Licensee representatives stated that the subject findings would be reviewed and appropriate mitigating action would be implemented.
- c. The sulfuric acid injection facility was also included in the construction site inspection. The facility is designed to control and adjust the pH of the concrete batch plant's liquid effluent within the assigned limits of pH 6 to 9 prior to discharge into the East holding pond. Inspector disclosed

the following: (1) facility was inadequately posted relative to its potential hazards; (2) perceptible leakage of sulfuric acid on the tank support structures, and limited area below the acid tanks; (3) periodic blocking of the 0.25 inch diameter carbon steel piping attached to the acid tanks. The inspector informed licensee representatives that although the above findings violated no apparent construction permit requirements, the hazards attending operation and maintenance of the facility required their immediate attention. A licensee representative stated that the above facility was temporary; however, mitigating actions would be implemented to improve the safety of the facility until such time that the permanent acid injection facility is completed.

6. Environmental Monitoring (Construction Effects)

Construction effects monitoring requirements are defined in Attachment B to the Construction Permits. The program includes monitoring of the following parameters, viz.: (1) peripheral runoff; (2) instream construction effects (Cumberland River); (3) aquatic biota. Terrestrial surveillance is also included.

- a. The inspector audited monitoring records and data compiled for peripheral runoff, instream effects, and aquatic biota for the period July 1, 1976, through August 1977. Inspection disclosed that monitoring was apparently conducted in accordance with permit requirements and the respective procedures. Records indicated that peripheral runoff was also monitored following heavy rainfall of 0.3 inch per hour or greater, and rainfalls in excess of 1.9 inches per 24 hours. Monitoring of aquatic biota confined to monthly primary production rate (in situ C-14 uptake) and quarterly benthic invertebrate communities is no longer required. Monitoring of instream effects was limited to the following parameters, viz., pH, DO, specific conductance, turbidity and total suspended solids. Inspection disclosed the following: (1) the licensee failed to include in the quarterly report mitigating actions attending excursions above the maximum assigned pH limit of 9.0 in East holding pond discharge to the receiving water on February 14, 15 and 20, 1978; (2) failure to record an excursion above the maximum assigned pH limit in the East holding pond discharge on March 20, 1978. The inspector informed licensee representatives that the above two occurrences constituted an item of noncompliance involving Section II.B.3 (Applicant's Implementation and Reporting Procedures) of the Construction Permits. Licensee representatives stated that the above findings would be reviewed and appropriate corrective actions would be implemented.

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7. Exit Interview

At the conclusion of the inspection on October 5, 1978, the inspector met with licensee representatives (denoted in paragraph 1). The inspector summarized the scope of the inspection and discussed the items of noncompliance listed herein.