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

Report No. 70-1151/82-18

Licensee: Westinghouse Columbia

Facility Name: Westinghouse Electric Corporation
Nuclear Fuel Division

Docket No. 70-1151

License No. SNM-1107

Inspection at: Westinghouse site near Columbia, South Carolina

Inspector: D. M. Montgomery for
C. D. Evans — Date Signed 10-20-82

Accompanying Personnel: G. B. Kuzo

Approved by: D. M. Montgomery — Date Signed 10-20-82
D. M. Montgomery, Chief
Independent Measurement and
Environmental Protection Section
Division of Emergency Preparedness
and Operational Support

SUMMARY

Inspection on October 4-5, 1982

Areas Inspected

This routine, unannounced inspection involved 14 inspector-hours on site in the areas of quality control and confirmatory measurements including: review of the laboratory quality control program; review of radiochemistry procedures and records; liquid and gaseous effluent sampling and accountability; and the collection of effluent samples for alpha analyses by the NRC Laboratory.

Results

Of the 3 areas inspected, no violations or deviations were identified in 3 areas.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*M. D'Amore - Plant Manager
*W. Goodwin - Regulatory Compliance Manager
*C. Sanders - Radiological and Environmental Manager
*R. Fischer - Radiological and Environmental Engineer
L. Wheatherford - Health Physics Supervisor

Other licensee employees contacted included 2 technicians.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on October 5, 1982, with those persons indicated in paragraph 1 above. Licensee representatives agreed to evaluate the need for flow measurement compensation and pressure gauges in the stack sampling assemblies; and to inform RII of the results of the evaluation by November 15, 1982.

3. Unresolved Items

Unresolved items were not identified during this inspection.

4. Laboratory Quality Control Program

The inspector reviewed the licensee's Quality Control Program for radioanalytical measurements in the following areas.

a. Assignment of Responsibility and authority to manage and conduct the QC Program

The Radiological and Environmental Engineer is responsible for general supervision of the radiological effluent monitoring program. The day-to-day responsibility for management of the radiochemistry count-room has been delegated to the Health Physics Supervisor.

b. Provisions for Audits

Audits of the radiation control program including the area of radioanalytical measurements are conducted periodically by management.

c. Provisions for Audits of Contracted Laboratory Services

The licensee utilizes Controls for Environmental Pollution for radioanalytical analyses of composite samples of the lagoon outfall and

urine samples. There are no provisions for audits of the contractor laboratory. The inspector noted, however, that the licensee conducted an audit in 1978 which was apparently initated by concerns of higher than normal alpha activity in urine samples. The audit disclosed the presence of a bias caused by the lack of a quality control sample (i.e., blank and/or spiked urine). The inspector discussed with licensee representatives the importance of audits to review the adequacy of the laboratory quality control program and verify its implementation. The inspector also discussed the need to include spiked samples for analyses by the contract laboratory to demonstrate the accuracy of contracted analyses. Licensee representatives agreed to review the adequacy of the quality control program for contracted analyses. This will be reviewed during a subsequent inspection (70-1151/82-18-01).

d. Methods for Assuring Deficiencies and Deviations in the Program are Recognized, Identified and Corrected.

There is no formal mechanism for documenting and investigating deficiencies identified by audits and other quality control activities. The inspector discussed this area with licensee representatives who agreed to review the need for a program to ensure that deficiencies identified in audits of the radiation control program are documented and corrected. This will be reviewed in a subsequent inspection (70-1151/82-18-02).

5. Review of Procedures and Records

a. The inspector reviewed the following procedures and records.

1. 05-01, "Preparation and Analysis of Inplant Air Samples", 11-20-81.

2. 06-02, "Roof Effluent Air Sampling and Counting", 4-26-82.

3. 06-06, "Collection of Routine Weekly and Monthly Environmental Samples", 4-5-82.

4. 05-04-A, "Determination of Alpha Activity of a Water Sample", 4-7-78.

5. Tennelec LB-5100 Alpha-Beta Counter Q. C. data, 1982.

6. Tennelec LB-5100 Voltage Plateua Curves, 1982.

7. Memorandum to plant files, Subject: Q. C. Laboratory Audit of Controls for Environmental Pollution, October 20, 1978.

The results of the procedure and record review are discussed in paragraph 5b-5c.

b. The inspector noted that there was no operating procedure for the Tennelec LB 5100 alpha-beta counters. The inspector was informed by

licensee representatives that the lack of an operating procedure for the counters had been identified in a recent audit of the radiation control organization. The inspector determined that corrective action is being initiated and that an approved procedure should be ready by November 15, 1982. The new procedure will be reviewed in a subsequent inspection (70-1151/82-18-03).

c. The inspector noted that the computational method for determination of total alpha activity released from the plant stacks may result in over reporting of releases. The method presently assumes 40 percent losses from self absorption. The inspector requested information as to how correction factors for self absorption were obtained and was informed that no documentation was available. The inspector requested that the licensee evaluate the degree of self absorption by analyzing inplant and stack particulate filters by gross alpha counting and by total uranium determination and comparing results. Licensee representatives agreed to perform these evaluations and make appropriate corrections if necessary. This area will be reviewed in a subsequent inspection (70-1151/82-18-04).

6. Review of Stack Sampling Assemblies

The inspector examined the stack particulate air samplers used for effluent accountability. The inspector noted that no pressure corrections are applied for flow rates measured at negative pressures. This results in measured flow rates greater than the actual flows at ambient conditions. The inspector estimated that this effect could result in under reporting of effluent releases by as much as 30 percent. The inspector reviewed effluent release reports for 1981 and 1982 and determined that no regulatory limits would have been exceeded. The inspector also noted that the stack particulate air sampling trains do not include pressure gauges. The inspector informed licensee representatives that it is a generally accepted industry practice to include a pressure gauge in close proximity to the rotameter for determining the flow rate pressure correction factor. Licensee representatives agreed to evaluate the need for flow measurement compensation and the need for pressure gauges in the stack sampling assemblies; and to inform RII of the result of their evaluation by November 15, 1982. This area will be carried as an Inspector Followup Item (70-1151/82-18-05).

7. Confirmatory Measurements

The inspector collected selected stack particulate filters and liquid effluent samples during the inspection. These samples will be analyzed for isotopic uranium by the NRC contract laboratory and the results will be compared with licensee values. The comparison of results will be reviewing during a subsequent inspection. (70-1151/82-18-06).