



UNITED STATES  
 NUCLEAR REGULATORY COMMISSION  
 REGION II  
 101 MARIETTA ST., N.W., SUITE 3100  
 ATLANTA, GEORGIA 30303

Report No. 70-1151/79-8

Licensee: Westinghouse Electric Corporation  
 Nuclear Fuel Division  
 Drawer R  
 Columbia, South Carolina 29205

Facility Name: Columbia Nuclear Fuel Plant

Docket No. 70-1151

License No. SNM-1107

Inspector: *[Signature]*  
 J. B. Kahle

5/29/79  
 Date Signed

Approved by: *[Signature]*  
 J. P. Potter, Section Chief, FF&MS Branch

5/29/79  
 Date Signed

SUMMARY

Inspection on May 8-11, 1979

Areas Inspected

This routine, unannounced inspection involved 32 inspector-hours on-site in the areas of 10 CFR Part 21, safety committees, nonroutine events, facility changes and modifications and operations review.

Results

Of the five areas inspected, no apparent items of noncompliance or deviations were identified in four areas; one apparent item of noncompliance was found in one area (Deficiency - failure to store special nuclear materials (SNM) in accordance with posted instructions, paragraph 9.b).

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## DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*M. D'Amore, Plant Manager
- \*R. Drescher, Chemical Manufacturing Manager
- \*W. Goodwin, Regulatory Compliance Manager
- \*J. Bush, QC Manager
- \*R. Fischer, Radiological and Environmental (R&E) Engineering  
Acting Manager
- \*E. Reitler, R&E Engineer
- H. King, Nuclear Criticality Engineer
- R. Burklin, R&E Engineer
- L. Coco, R&E Engineer
- J. Donavan, Purchasing Manager
- G. Lowder, Construction Maintenance Supervisor
- R. Peterson, Conversion Supervisor
- B. Lewis, Shift Supervisor
- D. Logan, Shift Supervisor
- N. Bolger, Shift Supervisor
- A. Legrand, Chemist
- F. Kulas, QC Supervisor
- E. Lacy, Facilities Engineer

Other licensee employees contacted included three technicians and six operators.

#### Other Organizations

- A. Kovalisky, Delaware Custom Materials, Inc.
- J. Hayes, Delaware Custom Materials, Inc.

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on May 11, 1979, with those persons indicated in Paragraph 1 above.

### 3. Licensee Action on Previous Inspection Findings

Not inspected.

### 4. Unresolved Items

Unresolved items were not identified during this inspection.

5. 10 CFR Part 21

A. Procedures and Controls

An examination of licensee procedures OPR-WRD-600-1, Rev. 2, "Identification and Reporting of Substantial Safety Hazards, Significant Deficiencies, and Unreviewed Safety Questions," P-710, Rev. 3, "Identification and Reporting of Significant Deficiencies, Reviewed Safety Questions and Substantial Safety Hazards," and P-710-1, Rev. 0, "Identification and Reporting of Substantial Safety Hazards (10 CFR 21) Relative to NFD Licensed Functions" showed that responsibilities had been established to adopt and implement procedures to (1) evaluate deviations or noncompliance, (2) inform responsible officer of noncompliance or defect and (3) report noncompliance or defect to the Commission. The procedures contain requirements for notifications, procurements, postings and records. No items of noncompliance or deviations were identified.

B. Procurements

Verification was made from an examination of purchasing records that 10 CFR 21 provisions were contained on applicable procurement documents. No items of noncompliance or deviations were identified.

C. Postings

An examination of the bulletin board in the hall outside the cafeteria showed that 10 CFR 21 and Section 20.6 of the Energy Reorganization Act of 1974 were posted as required by the regulations. No items of noncompliance or deviations were identified.

D. Evaluations

An examination of the records showed that there had not been any evaluations of noncompliance or defects as required by 10 CFR 21 since the last time an NRC inspection examined 10 CFR 21 requirements. This finding was verified by a representative of the licensee. No items of noncompliance or deviations were identified.

E. Records

The records showed that the licensee had been active in identifying which items, materials and services purchased by the licensee were applicable to 10 CFR 21 regulations. Presently the list has been reduced to criticality alarms, hydrogen detectors and criticality calculations. No items of noncompliance or deviations were identified.

6. Safety Committees

The Regulatory Compliance Committee monthly meeting minutes from November 1978 to April 1979 were examined. Topics of discussion dealt with regulatory changes, inspection findings, licensee amendments, unusual incidents, ALARA activities, airborne activity and other licensee concerns. The minutes showed that the plant manager, the manager of the radiation protection component and key staff members were in attendance as required by licensee conditions. No items of noncompliance or deviations were identified.

7. Nonroutine Events

An examination of unusual incident files and records showed that there were no incidents which were of significance to be considered nonroutine events. No items of noncompliance or deviations were identified.

8. Facility Changes and Modifications

A. Plant Expansion

The inspector toured the plant expansion facility. It appeared that the facility was approximately 85 percent complete. Installation of equipment had just begun. The storage columns for the solvent extraction operation in the scrap recovery area were being installed at the time of the inspection. Licensee representatives stated that occupancy is targeted for August 1979. A licensee representative stated that a licensee amendment would be obtained before any licensed activities were performed in the expansion.

B. Ventilation Exhaust and Filters

The inspector examined drawings and plans of modifications to the existing ventilation exhaust and filter systems. New effluent exhaust and filter housings are being installed on the roof for the 2A and 2B scrubber systems, the scrap recovery area, the on-line scrubbers, the conversion equipment containment and the Majac operations. The scrubber and scrap recovery area systems will contain secondary redundant filtration systems. Target date for completion of the Majac system is May 1979. Target date for the primary filtration portion of the other systems is August 1979. A secondary phase of the ventilation exhaust and filter modification is replacement of the filter house and blowers and redesign of the exhaust pickup for the sintering furnaces. This phase of the modification should be completed by October 1979. Another phase of the modification is to install a new air recirculation system with improved distribution of air supply and controlled make-up air. This system is designed to provide better balance, distribution and movement of air in the controlled area. Completion of this phase of the modifications is scheduled with the completion of the plant expansion. An examination of the drawings showed that the designs had been reviewed and approved by members of the radiation protection component.

C. Solid Waste Fixation

A diked basin has been constructed west and north of the existing west CaF lagoon. The area has been enclosed with a chain link fence of the type surrounding the existing plant facilities. Solidification of CaF sludge from the west lagoon with sodium silicate and cement was ready to commence when the inspector toured the area. Delaware Custom Material, Inc., has been contracted to perform the work. Their personnel explained the solidification process to the inspector.

No items of noncompliance or deviations were identified.

9. Operations Review

A. Procedures

Verification was made that operating procedures were available to operators and that the operators were familiar with the procedural requirements. Selected procedures were examined to determine that nuclear criticality safety and radiation protection safety parameter limits and requirements were contained in the procedures. No items of noncompliance or deviations were identified.

B. Postings

The inspector observed that criticality limit signs were posted at various work stations and storage areas. Storage arrays and transfer carts were posted with appropriate signs and instructions. In the QC Lab, a storage cabinet for active pellets and samples was posted with a criticality limit sign which required, among other things, that the shelves be separated by at least 16 inches. It was determined by the inspector that the shelves were separated by 15 inches. The inspector discussed other criticality storage and operating requirements for the QC Lab with licensee representatives. They were informed that failure to maintain the shelves at the required separation was an item of noncompliance. (79-08-01)

C. Logs and Records

The inspector examined several operating logs and records. Verification was made that equipment and processes were operated within the limits and parameters established in the procedures. No items of noncompliance or deviations were identified.

D. Special Requirements

The inspector verified that the following requirements were accomplished:

- (1) The liquid level detectors on the steam chests were operable.

- (2) The UF6 detection devices in the steam condensate lines were operable.
- (3) The valve covers were in place for UF6 cylinders being moved.
- (4) The remote closing devices were utilized on the vaporizers for closing the UF6 cylinder valves.
- (5) The spool pieces were removed at the bottom of the ion exchange columns which were not in use.

No items of noncompliance or deviations were identified.

E. Housekeeping

Housekeeping conditions appeared satisfactory. There were no apparent fire or industrial safety hazards. No items of noncompliance or deviations were identified.

10. Sludge Buildup in Tanks

Liquid wastes are discharged from the Q-tanks in the controlled area to two 30,000 gallon hold tanks in the waste treatment area prior to pumping to the waste treatment process. These tanks are flat bottom tanks with side discharges. A licensee representative stated that they had evaluated the possibility of sludge buildup but felt there would not be a buildup of sludge because the liquid was filtered prior to release from the Q-tanks and the liquid is recirculated in the 30,000 gallon tanks. Licensee representatives agreed that they could not be sure unless a visual inspection was made and stated that the tanks would be visually inspected for sludge buildup within the next 30 days. If sludge is present a sample will be collected for analysis. Region II will be informed of their inspection findings. No items of noncompliance or deviations were identified.

11. UF6 Cylinder Valves

A. Defective Packing Nuts

The inspector verified that the licensee did not order or receive any UF6 cylinder valves between May 8, 1978, and October 25, 1978. Only valves shipped between the above dates had potentially defective packing nuts. No items of noncompliance or deviations were identified.

B. Valve Installation Procedures

The inspector reviewed the licensee's procedure for the replacement of UF6 cylinder valves. Maintenance personnel replace the valves with an inspection by Maintenance and Operations Supervisors. The inspector stated that, because the 30 inch UF6 cylinders were DOT specification containers, the valve replacement should carry the same degree of quality assurance (QA) as the certificate of compliance containers or

the QA program required by 10 CFR 71.51. Licensee representatives acknowledged the safety significance pertaining to the UF6 cylinder valves. Also, the inspector questioned whether or not the procedure contained all the valve change requirements depicted in ORO-651, Rev. 4, "Uranium Hexafluoride: Handling Procedures and Container Criteria". Licensee representatives stated that they would re-evaluate their procedure for compliance with ORO-651, Rev. 4 and make revisions to their procedure, if necessary. No items of noncompliance or deviations were identified.