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

Report No. 70-1319/79-2

Licensee: U.S. Nuclear, Inc.
P. O. Box 680
Oak Ridge, Tennessee 37830

Facility Name: Bear Creek Road Fabrication Plant

Docket No. 70-1319

License No. SNM-1315

Inspection at Oak Ridge, Tennessee

Inspector: _____ 8/23/79
J. B. Yanle Date Signed

Approved by: _____ 8/24/79
J. P. Potter, Section Chief, FF&MS Branch Date Signed

SUMMARY

Inspection on August 16, 1979

Areas Inspected

This special, announced inspection involved six inspector-hours onsite in the areas of reviewing confirmatory survey activities by Oak Ridge Associated Universities (ORAU), collecting environmental and smear samples and followup on an item of noncompliance.

Results

Of the three areas inspected, no apparent items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

Licensee Employees

S. Weaver, President
*G. Carroll, Technician

Other Organizations

C. Kent, ORAU
B. Risley, ORAU

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on August 16, 1979 with those persons indicated in Paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance - Failure to Provide Adequate Employee Termination Reports (79-1-1). The licensee has reissued termination reports for all employees who worked at the licensees facility. Verification of this action was made by an examination of the records. It was determined by the inspector that external radiation, urine and lung count data for the entire time of employment for the individual was included in the termination reports. The records showed that reissued termination reports were prepared for individuals who terminated employment with the licensee several years ago.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. New unresolved items identified during this inspection are discussed in paragraph 11.

5. Status of Confirmatory Survey by ORAU

ORAU personnel were at the plant site to begin collecting environmental samples and making some very preliminary radiation level and contamination measurements. Location points for soil, sediment and water samples have been selected. Some of the environmental samples were collected during the inspection, in conjunction with samples collected by the inspector. The remaining environmental samples would be collected by the end of the week. Analyses of the samples will be performed at the ORAU laboratories in Oak Ridge. An ORAU representative stated that their plans were to collect the

environmental samples first. Then perform radiation and contamination surveys outside the building and work their way inside. The areas least likely to have been contaminated would be surveyed first. They plan to survey the area that was contaminated and cleaned last. They stated that they have maps or sketches prepared for the building and rooms. Their plans are to begin the survey work outside the building on Saturday, August 18, 1979.

6. Soil Samples

Soil samples were collected by the inspector at the following locations. ORAU representatives also collected samples at these same locations.

Sample Identification	Location
S-2	Where the creeks meet near the south edge of the property.
S-6	At the lower (south) end of the large liquid waste tank.
S-8	At the former location of the small liquid waste tank.
S-14	Where the solid waste drums were stored in the past. At a location between the parking lot and the restricted area fence on the south side of the building.
S-15	At a location approximately 70 feet southeast of the large liquid waste tank.
S-16	At a location one mile east of plant in the woods on the south side of Bear Creek Road.

The soil samples were sent to the Health Services Laboratory for analyses. Results will be reported later.

7. Water Samples

Water samples were collected by the inspector at the following locations.

Sample Identification	Location
W-1	From creek near southwest corner of property.
W-3	From creek near southeast corner of property.

Clinch	River From Clinch River collected approximately 3/4 mile west of plant.
Melton Hill	From south side of reservoir (Clinch River) approximately 1/2 mile east of Route 95.

The water samples will be analyzed in the Region II Lab. Results will be reported later.

8. Sediment Samples

Sediment samples were collected from along the edge of the creek bed at the following locations.

Sample Identification	Location
SD-1	At creek near southwest corner of property.
SD-2	At the location where the creeks meet near the south edge of the property.

Sediment samples were sent to the Health Services Laboratory for analyses. Results will be reported later.

9. Insulation Sample

The inspector collected an approximately 1000 cm^2 sample of insulation which was hanging from the ceiling in the melt cast room directly over the area where the vacuum melt furnace had been located. This sample was sent to the Health Services Laboratory for uranium analyses.

10. Smear Samples

Ten smear samples were collected from the control area. Locations were selected on the basis of the highest readings determined with an ORAU Micro R/hr survey instrument. The smears will be counted for alpha activity in the Region II Lab. ORAU personnel took smears at the same locations.

11. Micro R/hr Instrument Survey

The highest readings determined with the ORAU Micro R/hr survey instrument were over holes in the concrete floor and cracks and crevices. Several higher readings were observed along the edge of the wall in the melt cast room and in the hallway outside the powder room. The highest readings were detected in the doorways where the concrete floor of the original building meets the concrete floor of the addition. ORAU personnel removed the dirt and crud from a few of the holes and crevices. It was apparent that some of the activity was removable. ORAU personnel collected the material, removed from the holes and crevices, for further uranium analyses. A licensee representative was informed that all holes, cracks and crevices

should be thoroughly cleaned to remove the dirt and crud which might contain radioactive contamination. Concrete chipping or removal may be necessary to remove the material from cracks. A door sill between the melt cast room and the hallway to the powder room should be removed for accessibility for decontamination and monitoring. A licensee representative was informed that the licensee shall show that a reasonable effort has been made to eliminate residual contamination. The evidence of contamination in holes, cracks and crevices is an unresolved item. (79-2-1)