U. S. NUCLEAR REGULATORY COMMISSION REGION I

Report No. 70-820/87-02

Docket No. 70-820

License No. SNM-777 Priority 1 Category URD

Licensee: United Nuclear Corporation Recovery Systems Wood River Junction, Rhode Island 02894

Facility Name: UNC Recovery Systems

Inspection At: Wood River Junction, Rhode Island

Inspection Conducted: August 27-28, 1987

Inspectors:

J. Roth, Project Engineer

11/17/87

Ranald R. Bellainy for W. J. Pasciak, Chief, Hor Nov 18,1987 date Approved by: Effluents Radiation Protection Section. DRSS

Inspection Summary: Inspection on August 27-28, 1987 (Inspection Report No. 70-820/87-02).

Areas Inspected: Special announced inspection by one region-based inspector for the purpose of obtaining water samples from selected monitoring wells, to examine the status of decommissioning the site and the buildings and to observe the conduct of a verification survey by an NRC contractor.

Results: No violations were identified.

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DETAILS

1. Persons Contacted

K. Helgeson, Manager Nuclear and Industrial Safety J. Murphy, Health Physics Technician

2. Monitoring Well Water Sampling

The inspector observed the sampling of each monitoring well. Prior to sampling, each well was pumped for about 10 minutes in order to clear the lines of standing water. This water was discarded. The licensee took a five (5) gallon sample from each well and the NRC samples (one (1) gallon) were taken (split) from the licensee's samples.

a. Well Water Sampling

The condition under which each well sample was obtained are shown in the enclosed table.

b. Sample Analysis

The well water samples marked in the table above with an * were split by the NRC inspector with the licensee. Samples obtained by the NRC were sent to the USDOE Radiological and Environmental Services Laboratory (RESL) located in Idaho Falls, Idaho, for analysis. The licensee's samples were sent to Controls for Environmental Pollution, Inc., located in Santa Fe, New Mexico. Samples in excess of 5 picocuries/liter gross alpha and/or 50 picocuries/liter gross beta will be further analyzed, as necessary, for strontium-90, cesium-137, uranium isotopic, thorium isotopic, and gamma spectroscopy.

c. Sample Analysis Results

The sample analysis results from each laboratory will be compared by Region I. This comparison and a trend analysis, utilizing results from prior years, will be addressed in a subsequent inspection report. This is an Inspector Followup Item (IFI 87-02-01).

3. NRC Independent Review

a. Observations Concerning the Status of Site Decontamination

Subsequent to Inspection No. 70-820/86-02 the licensee completed removal of contaminated soil from grid blocks previously identified as contaminated. Those grid blocks included Grid Nos. D-64, D-70/71, D-94, D-96 and B-126. During this inspection, the inspector was accompanied to the site by the NRC contractor, Oak Ridge Associated Universities (ORAU) for the purpose of conducting a verification survey of the decontaminated grid blocks. Radiation surveys were conducted and soil samples were taken from each grid block. The soil samples were obtained by compositing soil removed from the four corners and the center of each block, while being observed by the inspector and licensee representatives. The soil samples were transported to the ORAU laboratories in Oak Ridge, Tennessee where they were subsequently ground, mixed and split into three fractions. One fraction was to be analyzed by ORAU, the second fraction was sent to the licensee's contractor, Controls for Environmental Pollution, Inc. for analysis and the third fraction was retained for the NRC by ORAU for referee analysis, if required.

Following analysis, each laboratory is to provide the inspector with the analytical results for review and evaluation. If the analytical results from each laboratory are similar and are lower than the NRC guidance value of 30 picocuries total uranium per gram of soil, Region I will recommend that NRC-NMSS release the licensee's outside area, within the restricted area fence, for unrestricted use. If the analytical results are not similar, the referee sample will be sent to RESL for analysis. If the sample analysis results indicate that further soil decontamination is required, the licensee will be informed. This was identified as an Inspector Followup Item (87-02-02).

4. Licensee Discussions

The inspector held continuing discussions with Mr. K. Helgeson during the inspection. The findings were presented as they were identified. At no time during this inspection written material provided to the licensee by the inspector. the enclosed table.

WELL WATER SAMPLES

Specific

Well	Sampling	Sampling	Conductivity	Water	Well
No.	Date	Time	(umhos)	Level (ft)	Depth (ft)
T-1 T-2 T-3* T-4 T-5	8/27 8/27 8/27 8/28 8/28 8/27	1348 1250 1054 0933 0925	50 70 68 96 58	19 22 22 22	65 57 62 62
T-6* T-7* T-8* T-9 PW-1 PW-2* W-A W-B* W-D W-E*	8/27 8/28 8/27 NOT IN SERV 8/28 NOT IN SERV 8/27 8/27 8/27	0940 0948 1024 1008 /ICE 0857 /ICE 1235 1118 1416	86 66 52 72 52 52 64 62 42	24 23.5 24 19 24 22 23 19	65 52 65 53 28 30 28
W-3* W-5 W-6 W-7* W-8A* W-9 W-10 W-11 W-12* 76-U* 77-B* 77-D* DH-1* DH-1*1 DH-2-1 DH-2-2 DH-2-2	8/27 8/27 8/27 8/27 8/28 8/28 8/28 8/28	1307 1345 1321 1131 1107 0915 0835 VICE 1042 1005 1040 1024 0954 VICE VICE VICE	62 60 62 84 56 40 94 200 2600 84 88 	22 19 20 22 20 18 18 25 22 18 25 22 	25 26 26 30 33 35 75 75 75 85 23-35