

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 70-820/85-01

Docket No. 70-820

License No. SNM-777

Priority 1

Category UHD

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: February 20, 1985

Inspector: J. Roth
J. Roth, Project Engineer

3/27/85
date

Accompanied by: Thomas E. Murley
Regional Administrator

Thomas T. Martin
Director, Division of Radiation
Safety and Safeguards

Approved by: R. R. Keimig
R. R. Keimig, Chief, Safeguards Section
Nuclear Materials Safety and
Safeguards Branch

3-27-85
date

Inspection Summary: Inspection on February 20, 1985 (Report No. 70-820/85-01)

Areas Inspected: Special announced inspection by a region-based inspector (8 hours) for the purpose of examining the status of decommissioning the facility.

Results: No violations were identified. The licensee completed decontamination of areas of the plant identified by an NRC contractor, Oak Ridge Associated Universities, during a resurvey conducted between October 17 and October 19, 1984.

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DETAILS

1. Persons-Contacted

R. J. Gregg, Plant Manager
K. Helgeson, Manager, Nuclear and Industrial Safety

2. Background

A resurvey of specific areas of the licensee's facility in the former processing areas, the warehouse, the N-Gas building and the columns tower was conducted by Oak Ridge Associated Universities (ORAU) personnel between October 17, 1984 and October 19, 1984. Grid blocks identified as requiring further decontamination by the licensee were identified to the licensee in Inspection Report No. 70-820/84-03.

3. Inspector Observations

The inspector noted that the licensee had completed decontamination of the identified areas in the following manner. In the process area, the concrete blocks in grid locations A-1453 and A-1463 have been removed and replaced with new concrete block. Grid block RA-225 in the receiving area was decontaminated by removing a contaminated sign which had been attached to a door. (The licensee also expects to remove and bury this door at an approved burial site.) The concrete block in grid locations C-263, C-359, C-365 and C-371 in the columns tower have been replaced with new block. The top of the foundation at grid location N 39.15 ft. has been ground down to remove the contamination. In addition, it was noted that the licensee had removed an additional one inch of concrete from the two grid blocks (CC-14 and CC-15) on the third floor ceiling. A detailed survey of the grid blocks on the third floor ceiling will be conducted during a subsequent inspection (85-01-01).

4. 1984 NRC Well Water Sample Analyses Results

The NRC sample analyses results for well water samples collected on August 23-24, 1984 during inspection 70-820/84-02 are presented below in Table 1.

TABLE 1

NRC 1984 WELL WATER SAMPLE ANALYSIS

<u>Well No.</u>	<u>Gross Alpha</u> <u>(pCi/l)</u>	<u>Gross Beta</u> <u>(pCi/l)</u>	<u>SR-90</u> <u>(pCi/l)</u>	<u>CS-137</u> <u>(pCi/l)</u>
T-1	-	-	-	-
T-2	0.2 ± 0.1	0	-	0
T-3	0.13 ± 0.07	6 ± 5	-	0
T-4	0.29 ± 0.09	78 ± 8	0	0
T-5	0.24 ± 0.08	0	-	0
T-6	0.4 ± 0.09	25 ± 6	-	0
T-7	0.15 ± 0.09	0	-	0
T-8	-	-	-	-
T-9	0.8 ± 0.2	0	-	0
PW-1	NOT IN SERVICE			
PW-2	0.7 ± 0.1	0	-	0
W-A	-	-	-	-
W-B	9.3 ± 0.8	0	-	0
W-D	0.9 ± 0.1	19 ± 6	-	0
W-E	-	-	-	-
W-3	-	-	-	-
W-5	-	-	-	-
W-6	-	-	-	-
W-7	1.0 ± 0.2	0	-	0
W-8A	1.9 ± 0.2	160 ± 10	3 ± 2	0
W-9	0.5 ± 0.1	0	-	0
W-10	-	-	-	-

TABLE 1 (Cont'd)

<u>Well No.</u>	<u>Gross Alpha</u> <u>(pCi/l)</u>	<u>Gross Beta</u> <u>(pCi/l)</u>	<u>Sr-90</u> <u>(pCi/l)</u>	<u>Cs-137</u> <u>(pCi/l)</u>
W-11	NOT IN SERVICE			
W-12	1.4 ± 0.2	110 ± 10	-	0
76-U	0.8 ± 0.2	68 ± 8	6 ± 2	0
77-B	5.0 ± 1.0	180 ± 20	28 ± 3	0
77-D	1.4 ± 0.2	56 ± 8	12 ± 2	80 ± 40
DH-1	0.4 ± 0.1	47 ± 7	-	0
DH-1-1	NOT IN SERVICE			
DH-2-1	NOT IN SERVICE			
DH-2-2	NOT IN SERVICE			

As indicated in Table 1, none of the gross alpha results exceeded the EPA drinking water limit of 15 pCi/l and only six of eighteen gross beta results exceeded the EPA limit of 50 pCi/l. The EPA limits for Sr-90 and Cs-137 are 8 and 200 pCi/l, respectively. The analytical data shown in Table 1, when compared to prior years' results, indicate a downward trend in the ground water contamination level. Well water samples will be split with the licensee during a subsequent inspection to be conducted during the summer of 1985.

5. Licensee Discussions

The inspector held continuing discussions with the licensee representatives denoted in paragraph 1. Findings of this inspection were presented to the licensee as they were identified. No written material was provided to the licensee by the inspector during this inspection.