

U. S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 70-820/83-01

Docket No. 70-820

License No. SNM-777 Priority 1 Category UR

Licensee: United Nuclear Corporation

UNC Recovery Systems

Wood River Junction, Rhode Island 02894

Facility Name: Fuel Recovery Operation

Inspection At: Wood River Junction, Rhode Island

Inspection Conducted: February 2-4, 1983

Inspectors: J. Roth 3/3/83  
J. Roth, Project Inspector date

Approved by: A. T. Gody 3/4/83  
A. T. Gody, Chief, Safeguards and Fuel date  
Facilities Section, Nuclear Materials  
and Safeguards Branch, DETP

Inspection Summary: Inspection on February 2-4, 1983 (Report No. 70-820/83-01)

Areas Inspected: Routine, unannounced inspection by a region-based inspector of: organization, internal review and audit, review of operations, radiation protection, transportation activities, and licensee action on previously identified enforcement items. The inspection was initiated on the dayshift and involved 26 hours of direct inspection time by one NRC region-based inspector.

Results: Two violations were identified in two areas; failure to provide alpha survey meters or hand monitors for the use of personnel exiting contamination control zones (paragraph 6a); failure to issue a safety work permit or operating procedure prior to the start of concrete removal from the process area floor on February 4, 1983 (paragraph 3a).

## DETAILS

### 1. Persons Contacted

- R. J. Gregg, Plant Manager
- \* K. Helgeson, Manager, Quality Assurance and Nuclear Industrial Safety
- \* D. McFadden, Manager, Operations

\*denotes those present at the site exit interview. Exit interview held by telephone with Mr. Gregg just prior to the site exit interview.

### 2. Licensee Action on Previously Identified Enforcement Items

(Closed) Infraction (820/80-05-01) 1979 Audit did not include analysis of radiation exposure for each work station. The inspector noted that the 1980 audit of the facility did include an analysis of radiation exposures at each applicable work station. Corrective actions were completed on this violation.

### 3. Review of Operations

The inspector made a physical inspection of the facilities being decommissioned and decontaminated.

#### a. Process Building

The licensee completed decommissioning of the process area. The final contamination survey report for the area was completed and submitted to the NRC by letter dated January 13, 1983. This report details survey information for only the process area, the pickle liquor room and the three columns rooms (tower). It was noted that the 1-J-5 process area free standing wall had been removed since the last inspection. During this inspection, inspector observed that the licensee was using a jack-hammer to remove the concrete flooring from around the pilaster located at the south end of this wall at location C-5. The inspector requested copies of operating procedures and/or a safety work permit covering this operation. Licensee representatives stated that no procedures or safety work permits had been issued. This was identified as a violation (83-01-01).

#### b. Ancillary Areas of the Process Building

The licensee initiated cleanup and decontamination of the utility room, ventilation mezzanine, chemistry laboratory, shipping-receiving area and the maintenance shop located in the building.

No violations were identified.

c. Yard Areas

The licensee continues cleanup of the yard areas inside the restricted area fence. Additional soil was being removed from yard areas north and east of the process building and from the former process pond areas. This soil will be packaged for shipment to burial during April, 1983.

No violations were identified.

d. Warehouse

The licensee has completed the removal of drums of solidified waste from the warehouse. Actions were initiated to decontaminate the warehouse floor during this inspection.

No violations were identified.

4. Internal Reviews and Auditsa. Weekly Audits

The inspector examined licensee records of weekly inspections conducted by the NIS Manager from January 8, 1982 to January 28, 1983. The inspections covered: use of protective clothing and plant safety, compliance and examination of each plant area.

No violations were identified.

b. Quarterly Review of Weekly Inspections

The inspector examined records of quarterly reviews of weekly inspections conducted by the NIS Manager to establish trends. The documents examined covered inspections conducted from January 1, 1982 to October 30, 1982. Contamination levels in the facility continued to decline as a result of the decommissioning effort.

No violations were identified.

c. Annual Audit

Records of annual audits conducted by a qualified individual not directly a part of the plant organization for the years 1980 and 1981 were examined by the inspector. The annual audit for the year 1982 had not been conducted at the time of this inspection. However, licensee representatives stated that the audit would be performed prior to the end of February, 1983 (within 14 months of the previous audit). This was identified as an unresolved item pending timely completion of the audit (83-01-02).

5. Organization

The inspector determined that there were no significant changes in plant organization or personnel since the last inspection (70-820/82-04).

No violations were identified.

6. Radiation Protection

a. Contamination Control

The inspector noted that all personnel monitoring instruments had been removed from the change lines. As a result, personnel could not survey their hands, shoes and clothing for residual contamination prior to leaving potentially contaminated areas of the facility. This was identified as a violation of approved license conditions (83-01-03). The licensee immediately installed personnel contamination survey instruments at the change line located in the men's change room.

b. General Air Samples

The inspector examined records of general air samples pulled from the process area three times each week from June 1, 1982 to January 3, 1983.

No violations were identified.

c. Instrument Calibration

The inspector examined calibration records for alpha and beta-gamma portable survey instruments from February 1979 through October, 1982. It was noted that calibration was conducted quarterly from February 1979 through May 1981 and every six months from May 1981 to October, 1982. The facility license requires calibration quarterly or at manufacturer recommended frequencies. The inspector verified that the manufacturer recommended calibration every six months for the instruments involved.

No violations were identified.

d. Bioassay Records

The inspector examined personnel bioassay records for the year 1982. No personnel exceeded the action levels specified in the facility license.

No violations were identified.

e. Personnel Radiation Monitors

The inspector examined records of personnel radiation exposures for the year 1981. No exposures were recorded in excess of 100 mrem; three persons were exposed to radiation between 10 and 99 mrem; and, 89 persons were exposed to less than 10 mrem total exposure for the calendar year. Similar tabulated exposure records for the year 1982 were not available at the time of this inspection.

No violations were identified.

7. Transportation Activities

The inspector observed the loading of a waste shipment into a transporting vehicle on February 3, 1983. According to licensee representatives, this was to be the last shipment of waste (shipment 452) to Oak Ridge, Tennessee until April, 1983. The shipment consisted of five 5 foot by 5 foot by 7 foot 8 inch crates, seven 4 foot by 4 foot by 4 foot boxes and eight drums of solidified lagoon waste and/or contaminated equipment.

Each shipping container was properly sealed, labeled, surveyed for radiation and contamination, and marked (Radioactive LSA) as required. The vehicle was properly surveyed, sealed, blocked and braced and placarded prior to release from the site. The inspector also examined the paperwork associated with this shipment and found no inadequacies.

No violations were identified.

8. Exit Interview

The inspector met with the licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on February 4, 1983. The inspector presented the scope and findings of the inspection as discussed in the report details. Comments made by licensee representatives during the exit interview have been incorporated into the applicable paragraphs of the report details.