

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 80-07
Docket No. 70-371
License No. SNM-368 Priority 1 Category UR
Licensee: United Nuclear Corporation
67 Sandy Desert Road
Uncasville, Connecticut 06382

Facility Name: UNC Naval Products Division

Inspection at: Montville, Connecticut

Inspection conducted: April 9-11, 1980

Inspectors: P. Clemons
P. Clemons, Radiation Specialist

4/30/80
date signed

date signed

date signed

Approved by: P. J. Knapp
P. J. Knapp, Chief, Radiation Support Section, FF&MS Branch

5-6-80
date signed

Inspection Summary:

Inspection on April 9-11, 1980 (Report No. 70-371/80-07)

Areas Inspected: Routine, unannounced inspection by a regional based inspector of the Radiation Protection Program including: inspector follow-up items, organization, source inventory and leak tests, dosimetry, respirator training, annual audit, spent acid samples, retraining, radiation surveys, bioassay, whole body count, dosimetry, receipt of radioactive material, air samples, smears, posting and ventilation. Shortly after arrival, areas where work was being conducted were examined to review radiation control procedures and practices. The inspection involved twenty hours on site by one regional based inspector.

Results: Of the 17 areas inspected, no items of noncompliance were identified in 15 areas. Two apparent items were identified in two areas (Infraction - Failure to conduct audit, paragraph 3; Deficiency - Failure to post an area, paragraph 4).

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DETAILS

1. Persons Contacted

Principal Licensee Representatives

Mr. T. Collopy, Manager, Nuclear Safeguards
Mr. W. Kirk, Manager, Nuclear and Industrial Safety
Mr. D. Luster, Specialist - Radiological and Environmental Control
Mr. G. Waugh, Vice President, Quality Control

The inspector also interviewed other licensee employees including Health Physics Personnel and Safeguard Personnel.

2. Licensee Action On Previous Inspection Findings

(Closed) Inspector Follow-up Item (371/77-19-01): Follow-up on licensee respiratory protection program. The inspector was informed that the licensee does not take credit for the use of respiratory protective equipment.

(Closed) Inspector Follow-up Item (371/79-03-01): Review grinding operation. The inspector reviewed the grinding operation and observed that exhaust ventilation had been provided.

(Closed) Inspector Follow-up Item (371/79-03-01): Determine identity of user pursuant to 10 CFR 71.12 (b). The inspector determined that the licensed material is transferred to the Department of Energy (DOE) prior to shipping, therefore DOE is the shipper of record.

3. Audits

The licensee is required to perform formal audits at a stated frequency. Condition No. 10 of Special Nuclear Material License No. SNM-368 incorporates the statements, representations and conditions in Part I of the licensee's application dated June 4, 1976, and as revised on March 4, March 8, and March 28, 1977.

Section 2.7.1 of the Licensee's application states a continuous re-appraisal of the safety program shall be provided through a system of daily checks, regular inspections, and audits.

Section 2.7.4 of the license states an audit program shall be maintained and the Manager, NIS shall prepare a schedule of audits to be performed. Section 2.7.4 also states, "An audit is a comprehensive inspection in which the results of previous daily checks, inspections or audits are also reviewed as an evaluation of the effectiveness of the program.... A formal audit shall be performed once a year by a team of specialists or higher level personnel from outside the Division...."

The inspector asked a licensee representative on April 9, 1980 if the formal audit of the radiation protection program had been conducted during 1979 as required. The inspector was told that the audit had been performed in February 1979 by the Corporate Nuclear Safety Review Team. The inspector requested to see a copy of the audit report.

The inspector was given copies of six reports that had been submitted to the Chairman of the Safety Review Team, who in turn compiled a synopsis of these reports and submitted a formal report to the President of the Naval Products Division. The inspector reviewed all seven reports, and none of the reports contained any reference to a formal audit of the radiation protection program.

The inspector asked a licensee representative how the reports represented an audit of the radiation protection program, and he was informed that the Radiological and Environmental Control Specialist had presented the radiation protection program to the Corporate Nuclear Safety Review Team in a "seminar setting" and the Review Team had asked questions of the Specialist as appropriate. The inspector asked if the review team had reviewed records to: verify that the dosimetry program had been conducted as required; if the bioassay program had been conducted as required; if annual retraining had been conducted as required; if the air sampling program had been conducted as required; if radiation surveys had been conducted as required; if septic tank sludge had been analyzed as required, etc. The inspector was told that the Corporate Safety Review Team had not reviewed any records.

The inspector noted that Section 2.7.4 of SNM-368 stated, "An audit is a comprehensive inspection in which the results of previous daily checks, inspections or audits are also reviewed as an evaluation of the effectiveness of the program...."

The inspector noted that an audit is a documented activity performed in accordance with written procedures or checklists to verify, by examination and evaluation of objective evidence, that applicable elements of the radiation protection program have been developed, documented, and effectively implemented in accordance with specified requirements.

The inspector noted that the Corporate Nuclear Safety Review Team had failed to review the records of the activities of the radiation protection organization or to examine other forms of objective evidence in their effort to evaluate the effectiveness of the radiation protection program. Consequently, their efforts in this area did not constitute an audit. This represents noncompliance with the license condition. (80-07-01)

4. Posting

On April 10, 1980, as the inspector toured the facilities, he noted that two access doors into Building "M" were not posted. A third door leading into Building "M" was posted but it is possible to enter the building through the other two doors without seeing the sign that was posted on the third door.

10 CFR 20.203, "Caution Signs, Labels, Signs and Controls", states: Each area or room in which licensed materials is used or stored and which contains any radioactive material (other than natural uranium or thorium) in an amount exceeding 10 times the quantity of such material specified in Appendix C of this part shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words:

CAUTION

RADIOACTIVE MATERIAL(S)"

THIS PARAGRAPH HAS BEEN INTENTIONALLY DELETED; IT CONTAINED 10 CFR 2.790(d) INFORMATION - NOT FOR PUBLIC DISCLOSURE.

Failure to post the area as required represents noncompliance with the regulations. (80-07-02)

5. Organization

The inspector asked a licensee representative on April 9, 1980 if there had been any organizational changes in the radiation protection organization since the last inspection. The inspector was told that the professional staff remained the same, but the Technician staff had been reduced by one. The licensee now has three Technicians to cover a large area. The inspector asked if this staff was sufficient to effectively conduct the program. The inspector was informed that recruiting was ongoing, but a suitable replacement had not been found at the time of this inspection. The licensee is conducting the program by "planned overtime" for the existing Technicians

No items of noncompliance were identified.

6. Leak Test

Condition No. 13 of Material License No. 06-06884-01 requires that by-product material sealed sources be leak tested at least every six months. The inspector reviewed leak test data for five sources, and the data indicated that the sources were leak tested every three months during 1979.

No items of noncompliance were identified.

7. Dosimetry

The inspector reviewed dosimetry records for 1979 for personnel monitored at the Montville site. Approximately sixty people were monitored during the year, and according to the data, no one exceeded the 10 CFR 10.101 limit. The maximum dose reported was 0.300 Rem for one employee.

No items of noncompliance were identified.

8. Spent Acid

Section 4.7.2.3, Part I, of SNM-368 states, "Spent acid shall be sampled and analyzed for uranium prior to shipment departure by the buyer. The analysis results shall be recorded."

The inspector reviewed spent acid sample analytical data for the period January-June 1979. The data indicated that thirty shipments had been made during the period and the results of all samples were less than 0.01 micrograms of uranium per milliliter.

No items of noncompliance were identified.

9. Training

Section 2.8.3, Part I, of SNM-368 states, "UNC shall conduct mandatory refresher training in Radiation Protection,...on an annual basis. Documentation shall be provided to assure compliance."

The inspector selected the names of ten employees from a list that had been provided by a licensee representative, and asked the training secretary to demonstrate that all employees had been retrained on an annual basis as required. All employees had been retrained on an annual basis.

No items of noncompliance were identified.

10. Radiation Surveys

Section 4.6.1, Part I, of SNM-368 requires radiation surveys be performed at certain frequencies. X-ray facilities are surveyed monthly and general surveys are done quarterly.

The inspector reviewed radiation survey data for 1979 to determine if the surveys had been performed and also to determine if there were problem areas. The data indicated that the surveys had been performed, and that radiation levels were within acceptable limits.

No items of noncompliance were identified.

11. Bioassay

Section 4.2.3, Part I, of SNM-368 requires personnel who work in controlled areas, and/or areas where respirators are used, to participate in a monthly urine bioassay program.

The inspector selected the names of five employees from a list of employees who work in these areas to determine if the requirement was being met. The bioassay data indicated that all personnel were participating as required, and the data also indicated there were no problems with exposure control.

No items of noncompliance were identified.

12. In-Vivo Counting

Section 4.2.3, Part I, of SNM-368 requires In-Vivo Counting be accomplished twice a year on specially selected employees. The selection is made by the Specialist-Radiological and Environmental Control.

The inspector reviewed data that indicated that approximately forty employees were counted in April 1979, and approximately fifty employees were counted in November 1979. Personnel involved in the procedure are on a rotating basis, but specific employees are counted at least once a year.

The maximum exposure reported for one employee was approximately forty-five percent of the maximum permissible body burden.

No items of noncompliance were identified.

13. Air Samples

The licensee has a routine program in which general air samples and stack samples are collected and analyzed daily. The inspector reviewed air sample and stack sample data for the period July-December 1979 to assure that the regulations were being complied with.

No items of noncompliance were observed.

14. Receipt of Radioactive Material

10 CFR 20.205 (b)(1) requires that each licensee upon receipt of a package of radioactive material must monitor the external surface of the package for contamination. The inspector reviewed the incoming shipment records for approximately ten shipments that were received during the period July-December 1979 to determine compliance with the regulations.

No items of noncompliance were observed.

15. Release of Material/Equipment from Controlled Areas

Condition No. 15 of SNM-368 states, "Release of equipment and materials from plant to off-site or from controlled to uncontrolled areas shall be in accordance with the attached Annex C, dated November 1976. Records of the contamination survey and the final disposition of any equipment shall be kept for audit by NRC."

On April 10, 1980, the inspector reviewed records of contamination surveys and the final disposition of items removed from controlled areas to uncontrolled areas. The period covered was October-December 1979.

The inspector reviewed approximately ten transfers of items and the records contained the contamination survey data and the final disposition of each item.

No items of noncompliance were observed.

16. Ventilation

Section 4.4.2, Part I, of SNM-368 requires that hood face velocities and filter pressure drop measurements be made at a stated frequency.

The inspector reviewed ventilation data to determine if the requirements were satisfied.

No items of noncompliance were identified.

17. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on April 1980. The inspector summarized the purpose and the scope of the inspection, and the findings as presented in this report.