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APR 2 1976

✓ United Nuclear Corporation
Attention: Mr. G. D. Geise
Vice President/General Manager
Naval Products Division
67 Sandy Desert Road
Uncasville, Connecticut 06382

License No. SNM-368
Inspection No. 76-06
Docket No. 70-371

Gentlemen:

This refers to the inspection conducted by Mr. K. Plumlee of this office on March 8-10, 1976 at the H Tract Facility and the Montville Facility, of activities authorized by NRC License No. SNM-368 and to the discussions of our findings held by Mr. Plumlee with Mr. C. Arpaia and Mr. D. Luster of your staff at the conclusion of the inspection, and to a subsequent telephone discussion between Mr. Plumlee and Mr. Luster on March 25, 1976.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, measurements made by the inspector, and observations by the inspector.

Within the scope of this inspection, no items of noncompliance were observed.

In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must include a full statement of the reasons on the basis of which it is claimed that the information is proprietary, and should be prepared so that proprietary information identified in the application is contained in a separate part of the document. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

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No reply to this letter is required; however, should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

Paul R. Nelson, Chief
Fuel Facility and Materials Safety
Branch

Enclosure:

IE Inspection Report No. 70-371/76-06

bcc:

IE Mail & Files (For Appropriate Distribution)

PDR

Local PDR

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State of Connecticut

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

IE Inspection Report No: 70-371/76-06

Docket No: 70-371

Licensee: United Nuclear Corporation

License No: SNM-368

Naval Products Division

Priority: 1

Category: A(1)

Safeguards
Group: _____

Location: New Haven, Connecticut

Type of Licensee: Fuel Fabricator

Type of Inspection: Decommissioning, Announced

Dates of Inspection: March 8-10, 1976

Dates of Previous Inspection: March 2-5, 1976 (Montville Facility)

Reporting Inspector: _____

Karl E. Plumlee
Karl E. Plumlee, Radiation Specialist

4/2/76
DATE

Accompanying Inspectors: _____

DATE

DATE

DATE

Other Accompanying Personnel: _____

DATE

Reviewed By: _____

Peter J. Knapp
Peter J. Knapp, Section Chief, Radiation Support Section

4-2-76
DATE

SUMMARY OF FINDINGS

Enforcement Action

A. Items of Noncompliance

1. Violations

None.

2. Infractions

None.

3. Deficiencies

None.

Licensee Action on Previously Identified Enforcement Action

Not applicable.

Design Changes

Not applicable.

Unusual Occurrences

None.

Other Significant Findings

A. Current Findings

1. Acceptable Areas

No inadequacies were identified during inspection of the following area:

Decommissioning of the "H Tract Facility".

2. Unresolved Items

None.

3. Infractions and Deficiencies Identified by the Licensee

None.

4. Deviations

None.

B. Status of Previously Identified Unresolved Items

None.

Management Interview

A management interview was conducted at the H Tract Facility on March 10, 1976.

Persons Present

C. Arpaia, H Tract Manager

D. Luster, Specialist, Radiation Protection

Items Discussed

A. Purpose of the Inspection

The purpose of the inspection was to verify the licensee's final survey report after decontamination of the H Tract Facility.

B. Acceptable Areas

The inspector stated that, based on the inspection results, the entire H Tract Facility would be within the release limits as soon as the calibration sources were removed. (Details, 6 & 7)

The licensee's representative stated that the sources would be taken to the UNC Montville Facility. (Subsequently the licensee notified the inspector by a letter dated March 12, 1976, that the sources were moved to the Montville Facility on that date.)

DETAILS

1. Persons Contacted

C. Arpaia, H Tract Manager
N. Grenon, Health Physics Technician
K. Helgeson, Radiation Protection Supervisor
D. Luster, Specialist, Radiation Protection

2. Scope of the Inspection

The inspector surveyed the H Tract Facility and verified the licensee's decontamination of the facility. (Details, 3.c)

3. Plant Records

The inspector reviewed the following records for the periods indicated and found that they appeared to be acceptable.

- a. Entry and Exit log sheet.
- b. Various blueprints of facility.
- c. Final Survey Report After Decontamination. (Transmitted by licensee's letter to W. T. Crow, Division of Fuel Cycle and Material Safety, NRC, dated February 26, 1976)

4. Facility Description

The site that is to be decommissioned includes the buildings designated 3H, 6H, 7H, 8H, 9H, 10H, 11H, 14H, and 44H as shown by Figure 1. These buildings are located in New Haven, Connecticut.

The licensee's "Final Survey Report after Decontamination" for this facility described the remaining activity in the building as of February, 1976. Decontamination work continued beyond that date and included the removal of additional floor material, and scrub-down of several areas where the highest activities had been found.

The licensee reported that these buildings had been vacated except for processing of non-radioactive materials in building 6H and the storage of non-radioactive materials in other buildings.

5. Areas Surveyed

The inspector, and the accompanying licensee's representatives, surveyed the floors and interior walls of each of the buildings identified under "Facility Description" and also other areas as follows:

- a. Unmarked shed north of building 3H, that had been used for storage of radwaste and radwaste drums.
- b. Miscellaneous small structures, not shown on Figure 1, including a shed for fire hoses at the south side of building 11H, a loading dock along the north side of 11H, and the guard post at the entrance to the area.
- c. Roof of building 8H.
- d. Open areas between buildings, and part of Parking Lot No. 3.
- e. An open trench along the south side of building 3H.
- f. Accessible points along pipe tunnels under and between buildings.
- g. Several trenches, pits and sumps, as found in the buildings identified under "Facility Description".

In addition to performing a systematic spot check of each room of the buildings described above the inspector checked the location reported by the licensee as the most radioactive point in each room. Detailed inspections were performed in rooms where α activities of 5,000 dpm or greater had been reported (licensee's final survey report figures 17, 20, 55 and 62, as examples). These were located in building 3H decontamination area and vault; in building 10H basement; and in building 11H basement (metallurgy lab).

6. Removal of Radioactive Materials During and Following the Inspection

Inspection on March 8, 1976, identified significant levels of radiation where radwaste was stored in drums, and where some calibration sources were kept by the licensee. The licensee shipped out the drums of radwaste on March 8 and shipped out the calibration sources (listed below) on March 12. It was necessary to move some calibration sources out of the building where they were stored in order to meet the licensee's stated facility release specifications during inspection of those buildings. The licensee's letter dated March 12, 1976, stated that the radioactive calibration sources were permanently removed from the site on March 12, 1976. The sources were described as follows.

Two 50-milligram radium 226 sources.
One 3-millicurie cobalt 60 source.
One 10-millicurie cesium-137 source.
One 0.01 microcurie plutonium-239 source.
One 0.0026 microcurie strontium-90 source.
Two 4,000 cpm alpha check sources.

7. Inspection Survey Results

Inspection effort was to verify that the radioactivity level in the H Tract Facility did not exceed acceptable surface contamination levels stated in Regulatory Guide 1.86 and in the December, 1975 draft of Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use (NRC Division of Fuel Cycle and Material Safety) as well as to verify the values reported in the "Final Survey Report".

The instruments used for this survey were checked using known sources before and after the inspection. The following instruments were used.

Eberline Model E-120, Serial No. 1268, equipped with a HP-190 probe (1.4 to 2.0 mg/cm² end-window Geiger-Mueller detector).

Eberline PAC-45, Serial No. 3023, equipped with a AC-3 scintillator detector probe.

Ludlum Model 16, Serial No. 4440, equipped with a model 44-2 gamma scintillator detector probe.

The inspection showed that the licensee's representatives had continued their decontamination efforts after making the surveys reported in the "Final Survey Report" and, except for the items identified above that were subsequently removed, no radiation or contamination levels were identified that exceeded those given in the licensee's "Final Survey Report". The highest activity detected during the inspection was 260 cpm (< 1,000 dpm/100cm²). The highest beta-gamma activity detected was 0.05 mr/hr. In each case these were maximum or point determinations and the average over a square meter of area was somewhat less.

No radioactivity level was identified that exceeded the acceptable levels referenced above.

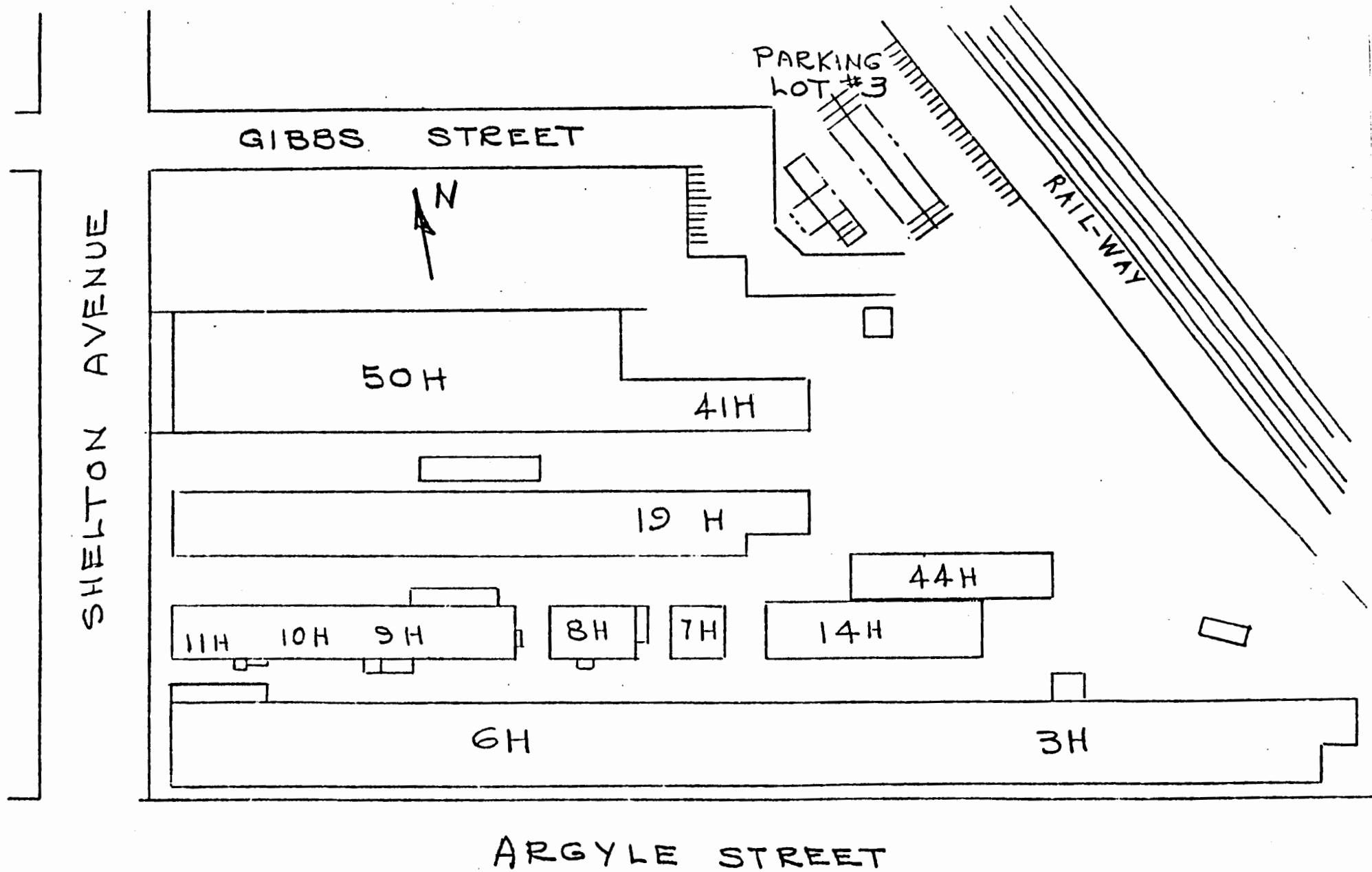


FIGURE 1