

UNC NAVAL PRODUCTS



Division of United Nuclear Corporation
A **UNC RESOURCES** Company

67 Sandy Desert Road
Uncasville, Connecticut 06382

Telephone 203/848-1511

In Reply, Please Refer

To: NIS-83-3-12

March 10, 1983

Mr. Thomas T. Martin, Director
Division of Engineering and Technical Programs
U. S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Subject: Inspection 70-371/82-14
November 10-12, 1982

- Ref: (1) Letter T. T. Martin to G. Amy dated January 21, 1983
(2) Letter G. Amy to T. T. Martin dated February 28, 1983
(3) Letter W. F. Kirk to R. G. Page (NRC Washington) on
Renewal of SNM Licence #368 dated February 24, 1982

Dear Sir:

With respect to our reference (2) reply to Item A of Appendix A, and Paragraph 3 of Details, Air Balance; please note that we had already addressed this problem in our renewal application, reference (3). Revision of Paragraph 4.4.2.2 proposed recognition of DAC (Derived Air Concentration) bases as a means of determining air flow direction concerns. Pending disposition of this particular modification, no other change will be proposed.

Attached is a copy of Reference (3).

Very truly yours,

A handwritten signature in cursive script that reads "W. F. Kirk".

W. F. Kirk, Manager
Nuclear Industrial Safety

/mas

Without attachment

cc: G. Waugh
D. Luster
J. Neumann

8305250582 830513
PDR ADOCK 07000371
C PDR

UNC NAVAL PRODUCTS

D.L.

UNC

Division of United Nuclear Corporation
A UNC RESOURCES Company

67 Sandy Desert Road
Uncasville, Connecticut 06382

Telephone 203/848-1511

In Reply, Please Refer
To: NIS-82-2-17

February 24, 1982

R. G. Page, Chief
Uranium Fuel Licensing Branch
Division of Fuel Cycle & Material Safety
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Renewal of SNM License #368, Docket #70-371

- Ref. : 1. Letter W. F. Kirk to W. Crow on Amendment of License dated July 30, 1981 and associated letters.
2. Letters W. F. Kirk to R. E. Cunningham on Radiological Contingency Plan dated November 12, 1981. NIS-81-11-3 and -4.
3. Letter W. F. Kirk to R. G. Page on Amendment of License dated April 30, 1981 and specific succeeding communications.

Dear Sir:

UNC-Naval Products requests renewal of its SNM License as presently constituted with the understanding that items pending under:

- Ref. (1) Revision of Criticality System and Standards. (Chapter 3, 7, 8 and 10).
- Ref. (2) New Radiological Contingency Plan. (Chapter 6)
- Ref. (3) Miscellaneous Subjects in Referenced Letter

shall be incorporated when resolved without additional charges.

License pages 4-15, 4-16, 4-17 have been revised to incorporate minor changes in HF documentation and controls as indicated and are attached.

Due to direct business competition with another NRC licensee (SNM #42), we request that we be informed of any less costly requirements imposed or approved by NRC Region II/Headquarters for license SNM #42 in similar subject areas of a non-proprietary nature. We have previously noted the existence of such items (Ref. (3) par. d-Reorientation Training) in which Region I imposed a more costly requirement upon UNC-Naval Products.

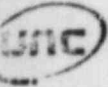
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Renewal of SSM License #368,

Docket #70-371

2/24/82

Page 2 of 2

 We request that the duration of the license be extended to at least ten years. The system for maintaining license documentation current is now well established and does not need to depend on the renewal for updating.

Enclosed is our check for \$76,800 to cover the present renewal fee as listed in 10 CFR 170.31.

Very truly yours,

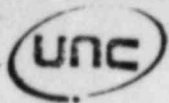
William F. Kirk

W. F. Kirk, Manager
Nuclear & Industrial Safety

/vgc

Enclosure

cc: D. Ganley/G. Amy
J. Neumann/T. Gutman
D. Luster ✓



LICENSE: SNM-368, DOCKET NO. 70-371 NAVAL PRODUCTS DIVISION	Revision 3
PART I: CONDITIONS AND SPECIFICATIONS	Approved
CHAPTER: 4 - HEALTH PHYSICS STANDARDS	Issued 2/24/82
SECTION: 4.4 - FACILITY AND EQUIPMENT REQUIREMENTS	Supersedes Approved Rev. 2, May 3, 1977

4.4.2.1 Local Exhaust

Only portions of Building B handle exposed uranium, very small amounts of which can become airborne. Hoods, glove boxes, or local exhaust shall be provided as required to maintain airborne and surface contamination within acceptable limits as defined by 4.1.2. Ventilation exhaust equipment shall be required for routine operations generating airborne concentrations in excess of 25% of MPC with minimum air movement requirements as follows:

Fume Hood Face Velocity	- 50 linear ft. per minute
General Purpose Hood Face Velocity	-100 linear ft. per minute
Local Exhaust	-100 linear ft. per minute
Glove Boxes	-Slight negative pressure (Except inert atmosphere boxes)

All process exhaust systems that discharge more than 25% of MPC during dry operations shall be filtered through high efficiency filters ($\geq 99.95\%$ for particles larger than 0.3 microns).

4.4.2.2 Air Handling Systems

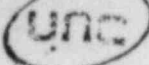
The systems shall provide intake, exhausting, recirculation, balanced air flow, and proper direction as well as heating, air conditioning, and filtration of the building air. This is a multi-component system and is described in detail in Part II.

Air flow shall be from contamination free areas into potentially contaminated areas. Within the potentially contaminated areas, air flow shall be from areas of lower airborne concentration to areas of higher airborne concentration. Continuous air sampling shall be used to identify these areas based on any quarterly averages which exceed 15% of the DAC.

Air flow balancing shall be checked and recorded on at least a quarterly basis or whenever equipment changes are made affecting air balancing.

The ventilation air handling system for the Health Physics controlled areas part of the building shall filter the material before reuse or release to environs.

In a large portion of the Building B, the uranium is encapsulated in a metallic cladding and the area is contamination free. Air recycled or exhausted from these contamination-free portions of the building shall not be filtered through high efficiency particulate filters.



**UNITED NUCLEAR
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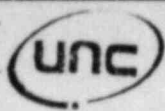
LICENSE: SNM-368, DOCKET NO. 70-371 NAVAL PRODUCTS DIVISION PART I: CONDITIONS AND SPECIFICATIONS CHAPTER: 4 - HEALTH PHYSICS STANDARDS SECTION: 4.4 - FACILITY AND EQUIPMENT REQUIREMENTS	Revision 3
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	Supersedes Approved
Rev. 2 May 3, 1977	

4.4.2.3 Filters and Scrubbers

The contaminated and potentially contaminated dry air from the controlled areas shall be filtered by high efficiency particulate filters with $\geq 99.95\%$ efficiency for 0.3 micron particles, to assure that air concentrations do not normally exceed 25% of the 10 CFR 20 limit before it is exhausted from the building. An evaluation shall be performed to determine whether recycled air within these areas requires additional filtration to protect personnel.

Pressure drop across each filter bank shall be measured and recorded on a monthly basis. Filters shall be changed when the ΔP is > 4 in. of water. An evaluation by Health Physics shall be made to determine the necessity for a filter change when the ΔP exceeds 2 inches.

An exhaust air scrubber shall be used on air exhausted from the sectioning Area prior to HEPA filtering. A fume scrubber shall be used to clean fumes from the exhaust of the fume hoods in the Chemistry Section. The units are described in Part II.



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4.4.3 Radioactive Liquid Waste System

4.4.3.1 General Description

Rad Waste is generated only in the controlled areas of Building B. Two separate collection systems are provided of approximately equal volume. One stream from Metallographic Laboratory Operations and Sectioning Operations is referred to as uranium bearing. A second stream, collecting shower and sink water from change rooms and certain Chemistry Lab sinks, is referred to as trace uranium bearing.

Initial collection of the uranium bearing radwaste shall be in one of two 1000 gallon boronated receiving tanks. A representative sample shall be analyzed for acceptable radioactivity concentration before the tank contents shall be passed through a centrifuge and collected in another 1000 gallon tank. From this tank, the radwaste is pumped through filters to one of six 2500 gallon retention tanks.

The trace uranium input shall be collected in its own receiving tank, and is pumped through filters into a 2500 gallon retention tank.

Further treatment of either input stream shall be contingent on results obtained from representative samples of the retention tank contents (batch process) that have been counted on laboratory equipment. Secondary treatment as further filtration, deionization, dilution or a combination of these shall be accomplished as required. If the sample meets control limits, the tank (batch) shall be sampled for pH (and adjusted if necessary to 5 to 8 pH). Acceptable batches shall be discharged through a final filter and a water meter. A proportional sample shall be collected downstream from the discharge meter for analysis. (See Part II).

4.4.3.2 Effluent Discharge

Treated radwaste meeting 10 CFR 20 Appendix B, Table II, at the point of discharge from the building, shall be discharged into the onsite sanitary septic tank. If the radwaste exceeds the control limit, supervision shall be notified to determine whether additional treatment or combination with other wastes can be authorized. At no time shall the 10 CFR Table II limits be exceeded from the sanitary septic tank regardless of the volume that shall be involved.