70-371

RETURN TO 396-SS

UNC Service Through Technology
INCORPORATED

175 Admiral Cochrane Drive
Annapolis, Maryland 21401-7394 301/268-7740

G. Vern Diedrick
Senior Vice President and Chief Financial Officer

PDR

June 6, 1986

Mr. W. T. Crow, Acting Chief
Fuel Processing and Fabrication Branch
Division of Fuel Cycle and Material Safety
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Financial Surety for Decommissioning Montville Plant
License SNM-368

Reference: 1) Letter W. F. Kirk to W. T. Crow dated
January 22, 1986 (NIS 86-1-9)

Dear Mr. Crow:

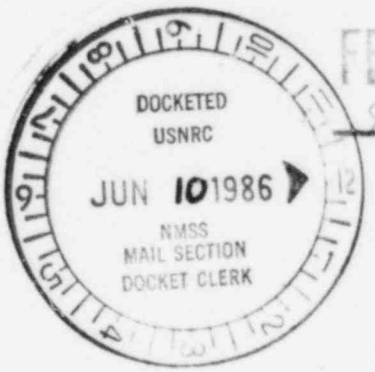
By Reference (1) UNC Naval Products Division of UNC Resources, Inc. submitted its cost estimate and financial surety plan for decontamination of the Montville Plant in event of termination of fuel processing at that location and of the subject NCR license.

UNC Resources, Inc. agrees herewith to provide the necessary funds to decontaminate the facility so that it may be released for unrestricted use.

Very truly yours,

G. Vern Diedrick

GVD/ad



FEE NOT REQUIRED
Supplemental Info

27077

UNC NAVAL PRODUCTS

UNC

A Division of UNC Resources Inc

67 Sandy Desert Road
Uncasville Connecticut 06382-0981

Telephone 203/848-15[illegible]

R. Gregg
G. Amy
R. Guest

B M KOSTELNIK

Memorandum NIS-86-3-23

To R. Messenheimer

Date March 28, 1986

MAY 28 1986

From W. F. Kirk

Subject Financial Surety for Decommissioning
The Montville Plant; NRC License SNM-368

Enclosed is a marked up copy of the previous letter submitted to the NRC concerning UNC's financial commitment to decommissioning.

Would you send me an equivalent letter for my transmittal to NRC. As an officer of the Corporation, you could sign the letter. The NRC has just made this request in response to our renewal request.

I have also enclosed for your information, a copy of the proposed decommissioning plan which we have recently submitted to the NRC as part of our license renewal application.

cc: Ron M.
OK for you
to sign.
Barry 5/28

UNC NAVAL PRODUCTS

Division of UNC Resources, Inc. 67 Sandy Desert Road Uncasville Connecticut 06382-0981 Telephone 203/848-15[illegible]

R. Gregg
G. Amy
R. Guest

Memorandum NIS-86-3-23

To: R. Messenheimer

Date: March 28, 1986

From: W. F. Kirk

Subject: Financial Surety for Decommissioning The Montville Plant; NRC License SNM-368

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I have also enclosed for your information, a copy of the proposed decommissioning plan which we have recently submitted to the NRC as part of our license renewal application.

UNITED NUCLEAR CORPORATION

UNC Crescent Plaza
7700 Leesburg Pike
Falls Church, Virginia 22043
(703) 821-7900

~~November 20, 1978~~

Mr. W. T. Crow, acting Chief
Fuel Processing and Fabrication Branch
Division of Fuel Cycle and Material Safety
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Financial Surety for Decommissioning Montville Plant
License SNM-368

Reference: 1) LETTER W.F. KIRK TO W.T. CROW DATED JANUARY 22, 1986 (NIS 86-1-9)

Dear Mr. Crow:

By Reference (1), UNC NAVAL PRODUCTS DIVISION OF UNC RESOURCES, INC. ~~United Nuclear Corporation~~ submitted its cost estimate and financial surety plan for decontamination of the Montville Plant in event of termination of fuel processing at that location and of the subject NRC license.

~~In response to Reference (2),~~ UNC RESOURCES, INC ~~United Nuclear Corporation~~ agrees herewith to provide the necessary funds to decontaminate the facility so that it may be released for unrestricted use.

Very truly yours,

UNC RESOURCES, INC
~~UNITED NUCLEAR CORPORATION~~

~~John V. Okuloki~~
Vice President and ~~Controller~~ TREASURER

/djb

J. LAWRENCE 10-5-87

UNITED NUCLEAR CORPORATION

John V. Okulski
Vice President
and Controller

UNC Crescent Plaza
7700 Leesburg Pike
Falls Church, Virginia 22043
(703) 821-7900

November 21, 1978

W. F. Kirk
United Nuclear Corporation
Naval Products Division
67 Sandy Desert Road
Uncasville, Connecticut 06382

Dear Mr. Kirk:

Enclosed is letter to the U.S. Nuclear Regulatory Commission re financial surety for decommissioning Montville Plant, License SNM-368, per the request of R. C. Johnson's memo of November 11, 1978.

Very truly yours,

John V. Okulski
Vice President and Controller

/djb

Enclosure

10-5-87
DATE

CHAPTER 7 - DECOMMISSIONING PLAN

7.1 General

Provision for decommissioning will be made should UNC decide to terminate this license. The facilities and site shall be decontaminated so that release for unrestricted use may be made in compliance with Table 7.1.

We have had prior experience in decommissioning a similar, but more extensive facility in 1975-1976 with no unexpected problems.

7.2 Plan

Only a small portion of the plant facilities (approx. 10%) is operated with any contamination present that would require cleanup upon decommissioning. The contamination is alpha type from non-irradiated enriched uranium.

Present sampling of the sanitary field shows that the requirements of Table 7.1.B Option 1 are met.Reference letter W.F.Kirk to W. T. Crow dated October 29, 1985..

Plant areas requiring decontamination for radioactive material at the time of decommissioning of the plant shall be handled in accordance with the following plan.

1. Establish contaminated equipment/utilities/facilities listing.

2. Review listing for potential criticality/health physics hazards.

3. Using experienced personnel/existing decon facilities.

a. Decontaminate useable equipment.
b. Decontaminate unuseable equipment-dispose.

4. Disassemble/cut up ventilation system. Watch for any accumulation beyond a specific volume. Decon and/or ship for burial (NRC approved sites) if uneconomical to clean.

5. Disassemble/cut up drain/rad.waste systems. Watch for any accumulation beyond a specific volume (collect sludge). Decon and/or ship for burial.

6. Decon the buildings (walls, roofs) and/or tear down, cut up and dispose by burial.

7. Decon and/or tear up floors, foundations, contaminated earth and ship for burial.

Table 7.1

A. ACCEPTABLE SURFACE AND SOIL CONTAMINATION LEVELS

NUCLIDE[a]	AVERAGE[b,c,f]	MAXIMUM[b,d,f]	REMOVABLE[b,e]
-nat, U-235, U-238, and ssociated decay products	5,000 dpm a/100 cm^2	15,000 dpm a/100 cm^2	1,000 dpm a/100 cm^2
ransuranics, Ra-226, Ra-228, h-230, Th-228, Pa-231, c-227, I-125, I-129	100 dpm/100 cm^2	300 dpm/100 cm^2	20 dpm/100 cm^2
h-nat, Th-232, Sr-90, a-223, Ra-224, U-232, -126, I-131, I-133	1,000 dpm/100 cm^2	3,000 dpm/100 cm^2	200 dpm/100 cm^2
eta-Gamma Emitters (nuclides ith decay modes other than lpha emission or spontaneous ission) except Sr-90 and thers noted above.	5,000 dpm $\beta\gamma$/100 cm^2	15,000 dpm $\beta\gamma$/100 cm^2	1,000 dpm $\beta\gamma$/100 cm^2

[a] Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.

[b] As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

[c] Measurements of average contaminant should not be averaged over more than 1 square meter. For objects of less surface area, the average should be derived for each such object.

[d] The maximum contamination level applies to an area of not more than 100 cm^2.

[e] The amount of removable radioactive material per 100 cm^2 of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.

[f] The average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/hr at 1 cm and 1.0 mrad/hr at 1 cm, respectively, measured through not more than 7 milligrams per square centimeter of total absorber.

[REG] Regulatory Guide 1.86, "Termination of Operating License for Nuclear Reactors", Revision 0, July, 1982.

TABLE 7.1

B. SUMMARY OF SOIL DISPOSAL OPTIONS

1. Disposal of acceptably low concentrations (which meet EPA cleanup standards) of natural uranium, depleted or enriched uranium, and uranium ores with no restriction on burial method.

   The concentrations specified for this option are acceptably low without restricting the method of burial. It is expected, however, that currently licensed operations will be conducted in such a manner as to minimize the possibility of soil contamination and when or if such occurs the contamination will be reduced to levels as low as reasonably achievable.

2. Disposal of certain low concentrations of natural uranium and depleted or enriched uranium (with no daughters present) when buried under prescribed conditions with no land use restrictions and no continuing NRC licensing of the material.

   Under this option, burial will be permitted only if it can be demonstrated that the buried materials will be stabilized in place and not be transported away from the site. Acceptability of the site for disposal will depend on topographical, geological, hydrological and meteorological characteristics of the site. At a minimum, burial depth will be at least four feet below the surface.

	Disposal Options (pCi/gm)	
Kind of Material	1a	2b
Natural Uranium (U-238 + U-234) with daughters present and in equilibrium	10	-
Depleted Uranium		
Soluble	35	100
Insoluble	35	300
Enriched Uranium		
Soluble	30	100
Insoluble	30	250

a Based on EPA cleanup standards.

b Concentrations based on limiting individual doses to 170 mrem/yr.

8. During above operations, contain/sample any runoff (rain, snow, water, etc.) or gaseous effluent as necessary.

9. Decon equipment, tools, clothing, etc. and disassemble decon area. Collect sludge, dust, etc.

10. Sample remaining earth, water (ponds, wells, pipes, etc.) waste disposal systems going off site. Statistically evaluate to requirement. Prepare report.

11. Review with Federal, State, local agencies as required.

7.3 Cost Estimate

UNC has experience in decommissioning and decontamination for unrestricted use of a similar facility. Its former core manufacturing shops in New Haven, Connecticut, were decontaminated in 1975-1976 and released for unrestricted use by the U.S. Nuclear Regulatory Commission on April 22, 1976.

Based on this recent actual experience, UNC estimates the cost, measured in current dollars, will not exceed $1,180,000.

The New Haven decontamination work included 9 truckloads of piping, obsolete equipment, concrete, earth and ducting. In our estimate for the Montville program, we have provided for 18 truckloads, though we expect it to be less than 6 truckloads.

Cost Breakdown

Item	Cost
18 truckloads (including burial)	$720,000
Contractor	150,000
UNC Expenses	150,000
Contingency	160,000
Total	$1,180,000

No irradiated material is involved in the contamination, only natural uranium which has been enriched in the U-235 isotope.

This estimate is believed to be conservative because of the following factors:

1. UNC's decontamination experience.

2. The fact that the New Haven operation had included processes no longer used and which created more severe contamination in the floor areas.

3. The fact that the Montville Plant was designed for its purpose initially, with design features intended to minimize spread of contamination and facilitate cleanup on both a routine basis and at final decommissioning. The New Haven buildings pre-existed and were adapted to nuclear material manufacture.

The New Haven decontamination was performed by UNC employees under UNC supervision.

7.4 Financial Assurances

UNC considers that its depreciation policy, initiated in 1972 at time of its decision to consolidate Division operations in Montville, provides full security for cost of decommissioning.

Depreciation for the facility is on an accelerated basis, with the main buildings to be depreciated to a 20% residual value in 20 years under the terms of UNC's supplemental agreement with the Department of Energy of April 6, 1972. At the expiration of the 20 year period, straight line depreciation will be charged until the book value is reduced to zero.

The facility is of modern, one-story construction with excellent rail and highway access. Replacement cost for the Montville buildings at March 31, 1978 was $25,314,000 and net book value was $5,809,000. UNC considers that the excess of replacement cost over book value provides an ample surety for the $1,180,000 decommissioning cost, and that the accelerated depreciation method, with book value to be reduced to zero, will provide continuing assurance of assets well in excess of the small decommissioning cost.

Docket No. 70-371

TO: William O. Miller, License Fee Management Branch

SUBJECT: MATERIALS LICENSE AMENDMENT CLASSIFICATION

APPLICANT: VNC

License No: SNM-368 Fee Category: _____

Application Dated: JUNE 6, 1986 Received: _____

1. The above application for amendment has been reviewed by NMSS/REGIONAL OFFICE in accordance with §170.31 of Part 170, and will require an amendment to the license. _____

2. The application is not subject to fees because it was filed

(a) ✓ pursuant to written NRC request ~~and the amendment is being issued for the convenience of the Commission,~~

or (b) _____ Other (State reason) _____

Signature W. C. Parr

Date JUNE 25, 1986