

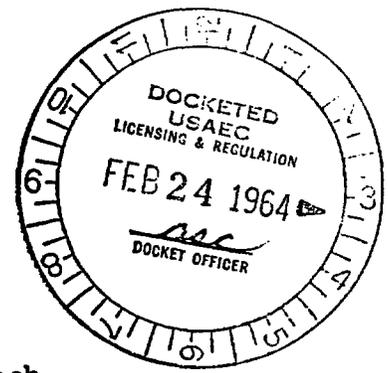
**UNITED NUCLEAR CORPORATION**  
**CHEMICALS DIVISION**

L&R File Copy 5pgs

February 19, 1964

ROUTE 21-A  
HEMATITE, MISSOURI

Mr. Eber R. Price,  
Assistant Director  
Division of Licensing and Regulation  
U. S. Atomic Energy Commission  
Washington 25, D. C.



ATTENTION: Mr. Robert L. Layfield, Acting Chief  
Source and Special Nuclear Material Branch  
Division of Licensing and Regulation

SUBJECT: APPLICATION FOR SOURCE AND SPECIAL NUCLEAR MATERIAL LICENSES  
FOR UNITED NUCLEAR CORPORATIONS SCRAP PLANT FACILITIES AT  
WOOD RIVER JUNCTION, RHODE ISLAND

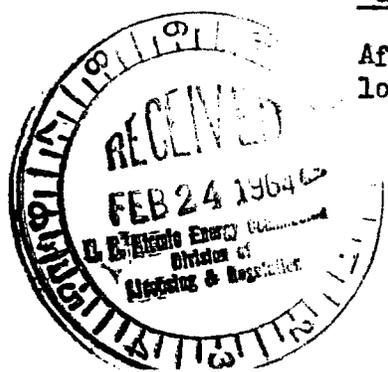
Gentlemen:

This is to supplement and revise our earlier letters on the above subject.  
Also included are confirmation of related agreements made in our discussions.

1. Revisions or additions will be made to the assay tank system to insure a maintenance of a minimum surface to surface distance of 24" between the tanks.
2. Sheet number A-706 is to be added to the list of drawings which we request withholding from public disclosure (reference: supplemental submission of January 31, 1964).
3. Sketches RM-2, RM-3, RM-4, RM-5, RM-6 are to be added to the list of drawings which we request withholding from public disclosure. These sketches are in Nuclear Safety Calculations and Reference Sheets, Appendix 1A.
4. On Sheet No. A-903. We are not going to install the two valves on the discharge line from condenser 1-E-1.
5. Section 302.2.7 Head Ends Calciner.

Calciner

After first sentence, insert: "The two trays are covered with loose fitting lids."



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And at the end of the paragraph add: "The trays will be removed and any material remaining in the retort tube will be removed and put into the trays. This will complete the cycle of operation."

6. The following typographical corrections are to be made:
  - a) Nuclear Safety Calculations and Reference Sheets, p. 148; 3.b):  
Change <12' to >12'.
  - b) 302.6.1 General  
Delete the word "normally" in the first sentence.
  - c) Page 2 of section 700; last paragraph: Reference to 501.3 should be reference to 504.3.
  - d) 302.2.4 Hood 1-L-9A  
Reference to 302.5.3 should be reference to 302.2.3.
7. Page 13 of section 300; fourth paragraph should read: "The solution containing the dissolved U-Al alloy is air blown through Filter 1-F-24A (7 $\frac{1}{4}$ " x 7 $\frac{1}{4}$ " x 6") to the assay tank (1-D-34) for sampling and weighing."
8. On revised page 30 of section 300 (submittal of February 18, 1964):  
Add to e) General:
  5. Immediately after turning steam off in shut down, the drain valve from the shell side will be opened.
9. Page 15 of section 300  
Cyclone 1-X-2  
Add to last sentence of second paragraph: "but for additional safety this tank is more than 24" from the dissolver legs."
10. The equivalent feature of item 9 is present in the lined dissolver.
11. Incoming shipments of solid scrap will be visually inspected, sampled and analyzed; information thus gained will be compared against shippers material transfer statements.



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12. Page 1 of section 700: BE Permit 1483

Delete: "or solutions".

Also, see attached separate writeups of additions, revisions and corrections.

Yours truly,



L. J. Swallow

LJS:cn

Encl.



ADDITIONS, REVISIONS, AND CORRECTIONS

301 General Considerations

Add:

6. To prevent employees from collecting leaks and overflows of special nuclear materials in unsafe containers the following steps will be taken:
  - a) Each new employee will be instructed not to use unsafe containers for such purposes.
  - b) Any containers such as waste paper, mop buckets, etc., used in the process area are limited to safe geometry or have holes such that a safe slab or volume is maintained.
  - c) Special instructions are provided to the employees for cleanup.

Change:

- 3.c) weekly to monthly

302.2.3 Hood 1-L-14

Add to the paragraph Ball Milling

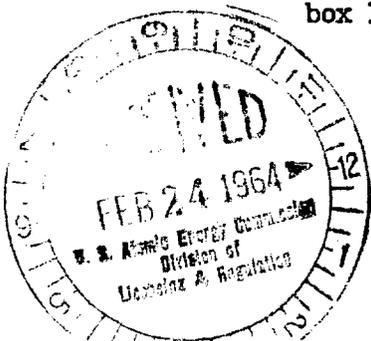
The dummy ball mill will be painted red or otherwise distinctively marked for positive identification.

Also the third sentence should be changed to read as follows:  
"For materials having a density greater than this a maximum of 2 mills spaced 1 foot from two other mills together will be used; in addition, a mass limit of 4 kg U-235 per ball mill will be maintained."

304.10 Product Blending (Equipment Number 1-L-6, 1-M-1, 1-L-14, and 1-K-4; Sheet numbers A-705 and A-709).

Add to the second paragraph:

No water lines will be connected to glove box 1-L-6 and other hydrogenous or moderating materials will be excluded from glove box 1-L-6.



501 Receiving and Storing Procedure

Replace the last two sentences of the second paragraph with:

The containers are then taken to a proper storage area where the entire shipment is stored either:

- a) 12 feet (or a distance across an orthographic projection of either array on a plane perpendicular to a line joining their centers whichever is greater) from any other special nuclear material, or
- b) separated from other special nuclear material by an 8" thick solid concrete wall.

Incoming materials will normally be stored outside in the as received container. In some cases the containers maybe stored inside in accordance with the criteria for outside storage. If the material is removed from the container, it will be stored in an approved storage location according to procedures described elsewhere in this application.

504.2.1 Eleven Liter Bottle Storage Rack

Add to the second paragraph:

The rack will be designed to minimize any accidental displacement of the rack or bottles in storage.

503.1 General

Delete from the second paragraph the words "and/or by limited safe mass amounts in each container with limited safe array spacing."

504.3 Equipment and nuclear safety, storage shelves for Uranium Alloys Compounds or solutions.

Change the maximum quantity of uranium metal (or alloys) per container to 10 kg U-235.

701, Summary Listing

Replace the last paragraph with the following:

Single layer shipments are specified for all of the above. "DO NOT DOUBLE STACK" will be stenciled on each outside container. Except for exclusive use shipments carrier certification will be obtained from each carrier enroute that he will not co-mingle any shipment with any other shipment of radioactive or special nuclear material. This certification will include handling procedures at transship points.

