

Docket No. 70-687

APR 23 1981

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MEMORANDUM FOR: William O. Miller, Chief
License Fee Management Branch, ADM

FROM: Leland C. Rouse, Chief
Advanced Fuel and Spent Fuel Licensing Branch
Division of Fuel Cycle and Material Safety

SUBJECT: FEE CATEGORY ASSIGNMENT FOR LICENSE NO. SNM-639

This refers to your memorandum of January 2, 1981 concerning the fee category assignment for SNM-639 issued to Union Carbide Corporation (UCC) at Tuxedo, New York. Please accept my apology for not getting back to you sooner.

We have consulted with our Division of Safeguards on the questions posed in your memorandum and a copy of a note on this matter from George W. McCorkle, Chief, Physical Security Licensing Branch, to me is enclosed. On the basis of these discussions with Safeguards staff (including members of the Material Control and Accountability Branch), following is the information you requested:

1. "The actual amount of U-235 UCC is allowed to possess and use under their license."

Subsequent to the issuance of Amendment No. 3 on March 26, 1979, License No. SNM-639 authorizes a total possession of 13 kg of U-235 as high enriched uranium. The material may be in unsealed form, but Section 9 of Materials and Plant Protection Amendment MPP-3, as issued January 30, 1979, limits the quantity of U-235 as high enriched uranium, in unirradiated form to less than 5 kg. Thus, while the license permits a total possession of 13 kg U-235 as high enriched uranium, only up to 5 kg may be possessed as unirradiated material. The license would permit possession of up to 5 kg U-235 unirradiated and 7 kg U-235 irradiated material

2. "A description of the authorized use of the 13 kg of U-235."

The licensee's operations under License No. SNM-639 may be briefly described as follows: High enriched uranium as unirradiated UO₂ is received and processed into the form of target material for insertion into the UCC reactor. After irradiation of the U-235 targets in the reactor, they are transferred to the UCC hot cells for dissolution

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and processing to recover selected radioisotopes for subsequent sale and distribution (primarily medical radioisotope users). The remaining U-235 and fission products from the dissolved irradiated targets are accumulated and stored for a period of time. Until recently the accumulated solutions, after solidification, were shipped for disposal as waste. On June 27, 1980, the license was amended to authorize a further waste processing step in the hot cells that enables precipitation of the uranium in the waste.

The supernate from the precipitation step, containing about 50 percent of the fission products and small quantities of uranium, is solidified and shipped as waste for disposal. The precipitate, containing most of the uranium and the remaining fission products, is calcined and then shipped to the Savannah River Project for reprocessing and recovery of the remaining enriched uranium.

- 3. "Your opinion as to whether there is a conflict between what the license authorizes and the safeguards amendment (MPP-3) issued January 20, 1979. In addition, during the period between March 26, 1979 and June 27, 1980, was the irradiated fuel authorized by the license for storage only?"

As explained in Item 1 above, we see no conflict between the possession limits and license conditions as authorized in the license by the Division of Fuel Cycle and Material Safety and the conditions in the safeguards amendment, as issued by our Division of Safeguards. With respect to the period between March 26, 1979 and June 27, 1980, the answer to the question is no. As explained in Item 2 above, the license has authorized processing of the irradiated U-235 targets (not fuel) in the hot cells throughout this period. The June 27, 1980 date is significant only in that an additional processing step was authorized.

In summary, with respect to fee categorization we may have a unique situation not contemplated by the fee structure. From the viewpoint of radiological and criticality safety (and environmental, as applicable) aspects, the license is clearly in Category ID. However, for safeguards aspects, the activities from the licensing and inspection standpoint may more closely approach Category IG.

If you have any further questions concerning the safeguards aspects, I suggest you contact George McCorkle, Chief, Physical Security Licensing Branch (74018), and Bob Erickson who is acting Chief for the Materials Control and Accountability Branch (74043).

Original signed by
Leland C. Rouse

Leland C. Rouse, Chief
Advanced Fuel and Spent Fuel Licensing Branch
Division of Fuel Cycle and Material Safety

Enclosure: Note to LCRouse dtd 2/13/81

cc: GMcCorkle, SG

BErickson, SG
Dweiss

FCAF

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OFFICE	BErickson, SG	FCAF				
SURNAME	Dweiss	LCRouse.f1b				
DATE		74205				
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

FEB 13 1981

NOTE TO: Lee Rouse, FCAF

SUBJECT: UNION CARBIDE (LICENSE NO SNM-639) FEE SCHEDULE

We have reviewed your proposed response to Bill Miller's memo on the above subject and agree that there is no conflict between the License SNM-639 and the Materials and Plant Protection Amendment.

We believe that the SG amendment bars Union Carbide from activities normally conducted by licensees subject to Schedule 1D fees. A reduction below the 1D rate would, therefore, seem appropriate.

A handwritten signature in cursive script, appearing to read "G. W. McCorkle".

George W. McCorkle, Chief
Physical Security Licensing Branch
Division of Safeguards, NMSS