



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

MAY 6 1971

Socket 70-820
(2)

United Nuclear Corporation
Commercial Products Division
Attn: Mr. R. I. Hanfling
Finance and Control
P.O. Box 1883
365 Winchester Avenue
New Haven, Connecticut 06508

Gentlemen:

License Condition 3.1 of the Safeguards amendment to your license requires that you determine the U-235 content of all receipts, and the limits of error associated with these quantities. It further requires that you make sufficient measurements to substantiate the quantities and limits of error.

We are concerned with the practices followed by licensees in the receipt of uranium hexafluoride in that receivers of this material have not been making sufficiently comprehensive measurements of the contents of UF₆ cylinders at the time of receipt.

In order to show compliance with the requirements of Condition 3.1, as they apply to the receipt and inventory of UF₆, licensees in the future must be able to demonstrate that they have done the following things:

Measurements of UF₆ must be made promptly upon receipt, including weight, chemical, and isotopic analyses of the contents of each cylinder, or, in lieu of this, the receiver or his agent (not an employee of the shipper) must witness the sampling of the cylinders as they are filled, and the sample shall be analyzed chemically and isotopically by the receiver or his agent.

Licensees receiving UF₆ which has been sampled at the diffusion plant, under witness, should make provisions to assure that the valves of the cylinders are capped and sealed before shipment from the diffusion plants, to detect

D-48

any possible opening of the cylinders while they are in transit. Further, the sealed containers should be inspected upon receipt for seal integrity. If the seal is found to be broken, a sample must be taken promptly for chemical and isotopic analyses, or the cylinder shipped to a facility where such a sample can be taken. In addition, the licensee will be expected to weigh the cylinders upon receipt to check the gross weight measurement made at the diffusion plant and, as soon as the UF₆ is processed into the plant stream, a sample must be taken at the first measurable point for chemical and isotopic analyses. These analyses should then be rationalized with the values found at the diffusion plants.

UF₆ cylinders placed into storage shall be sealed by the licensee and the seals inspected monthly for integrity. Broken seals shall be investigated by the licensee and a determination made as to whether any remeasurement of the contents is necessary.

We feel that sufficient time has elapsed since your license was amended to incorporate safeguards conditions for you to have developed procedures and/or facilities for the measurement of all receipts of special nuclear material, including UF₆. Beginning June 1, 1971, our inspectors will determine compliance with these requirements in connection with the license conditions requiring the independent measurement of all shipments and receipts and determination of measurement limits of error.

Sincerely,

A handwritten signature in dark ink, reading "C. D. W. Thornton". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

C. D. W. Thornton, Director
Division of Nuclear Materials
Safeguards