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S-8

Donald A. Nussbamer, Chief
Source & Special Nuclear Materials Branch, DML

June 1, 1964

Robert L. Stevenson, Acting Chief
Criticality Branch, DML

UNITED NUCLEAR CORPORATION - SHIPPING DILUTE SOLUTIONS -
DOCKET NOS. 70-36, 70-371, AND 70-620, TELEGRAMS DATED
MAY 26 & 27, 1964

SYMBOL: DML:RHO

UNC has requested a license amendment for all of its facilities to ship unlimited quantities of dilute solutions in 55-gallon drums (ICC 6J). The solution will not exceed 5 g U-235/U and total mass in each container will not exceed 800 g U-235.

In order to continue our review of this license amendment application, we recommend the following be sent to the applicant:

"Please confirm that each container will independently be determined not to exceed the concentration and mass limits of your TWX dated May 26, 1964. A composite sample taken from six 55-gallon containers will not identify maximum concentrations and mass limits for individual containers."

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6/1/64	6/ /64

6-199

THIS IS UNITED NUCLEAR RADIO MAY 27, 1964

MR. DONALD A. NEISSAUMER, CHIEF

SOURCE & SPECIAL NUCLEAR MATERIALS BRANCH

DIVISION OF NUCLEAR LICENSING & REGULATORY REGULATION

UNITED STATES ATOMIC ENERGY COMMISSION

WASHINGTON, D. C.

EXTRA

RE MY TWX OF MAY 26, 1964 - SHIPMENT OF URANIUM-BEARING SOLUTIONS
CORRECT FOURTH LINE OF ITEM NO. 6 TO READ AS FOLLOWS. . . OF NOT MORE
THAN 2 GRAMS U-235 PER LITER OR 350 GRAMS PER CONTAINER. . .

HERBERT S. KALISH

COMMERCIAL FUEL MANAGER

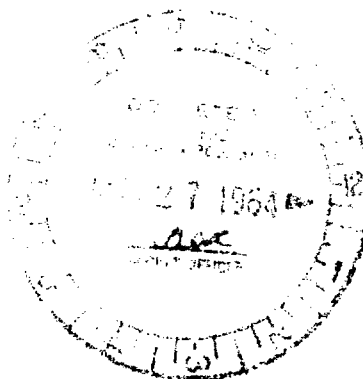
FUELS DIVISION

UNITED NUCLEAR CORPORATION

NEW HAVEN, CONN.

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RCD AT 27/1350Z DE HQS WASHDC TNT



TWX 1000000

TWX INCOMING

DOCKET NO. 70-36, -371 +

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1964 MAY 26 5 04

EXTRA

U.S. ATOMIC ENERGY COMM.
TWA UNIT

THIS IS UNITED NUCLEAR CALLING MAY 26, 1964

MR. DONALD A. NUSSBAUMER, CHIEF
SOURCE & SPECIAL NUCLEAR MATERIALS BRANCH
DIVISION OF LICENSING & REGULATION
UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

UNITED NUCLEAR CORPORATION REQUESTS EXTENSION OF ITS ~~LICENSES~~ SNM-33,
SNM-368 AND SNM-777 FOR ITS PLANTS AT HEMATITE, MISSOURI, NEW HAVEN,
CONNECTICUT AND CHARLESTOWN, RHODE ISLAND, TO PERMIT SHIPMENT OF
URANIUM-BEARING SOLUTIONS UNDER THE FOLLOWING CONDITIONS. . .

1. THE SOLUTIONS WILL INCLUDE PICKLE LIQUORS, ELUTRIATION SOLUTIONS, LABORATORY WASTES AND OTHER SOLUTIONS WITH U-235 CONCENTRATIONS LESS THAN 5 GRAMS PER LITER /H/X LESS THAN 5200/ PER 10 CFR, PART 71, PARAGRAPH 71.41 /B/ AND TOTAL CONTENT LESS THAN 800 GRAMS U-235 PER DRUM.
2. THE URANIUM CONTENT WILL BE DETERMINED BY TAKING A COMPOSITE CHEMICAL SAMPLE OF SIX 55-GALLON CONTAINERS.
3. THE SOLUTIONS WILL BE PACKAGED FOR SHIPMENT AND STORAGE IN 55-GALLON POLYETHYLENE DRUMS INSERTED INTO 55-GALLON CAPACITY METAL DRUMS. THE POLYETHYLENE DRUM IS AN ICC 2S CONTAINER AND THE METAL DRUM IS AN ICC 6J CONTAINER. BUREAU OF EXPLOSIVES PERMIT NO. BA-93 IS CURRENTLY IN FORCE FOR THIS TYPE SHIPMENT.

1. THE FOLLOWING INFORMATION IS REQUESTED FOR THE PURPOSE OF THE
APPLICATION FOR A LICENSE TO OPERATE A RESEARCH REACTOR.

2. THE REACTOR IS TO BE USED FOR THE PURPOSE OF RESEARCH AND
DEVELOPMENT OF NEW MATERIALS AND FOR THE PRODUCTION OF
RADIOISOTOPES. THE REACTOR IS TO BE OPERATED AT A MAXIMUM
THERMAL POWER OF 100 KW. THE REACTOR IS TO BE OPERATED
AT A MAXIMUM REACTOR TEMPERATURE OF 300°C. THE REACTOR IS
TO BE OPERATED AT A MAXIMUM REACTOR PRESSURE OF 100 PSI.

3. SINCE FRACTIONATION IS A KNOWN FACTOR IN THE REACTOR
DUE TO THE VARIOUS ELEMENTS AND TYPES OF MATERIALS USED IN
THE PROCESS THIS TYPE OF FRACTIONATION WILL BE LIMITED TO A CONCENTRATION
OF NOT MORE THAN 2 GRAMS U-235 PER LITER ^{of} OF THE REACTOR SOLUTION,
WHICHEVER IS LESS. IN ADDITION, 1 GRAM OF CARRIER METAL WILL BE
ADDED PER GRAM OF U-235 IN THE LABORATORY WASTE SOLUTION.

4. LICENSE AMENDMENT IS REQUESTED TO COVER UNLIMITED QUANTITY SHIP-
MENTS OF THE ABOVE BASIS.

HERBERT S. KALISH

COMMERCIAL FUEL MANAGER

FUELS DIVISION

UNITED NUCLEAR CORPORATION

NEW HAVEN, CONN

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