



DOCKET NO. 27-7
nuclear corporation of america

isotopes specialties company--division

victoria 9-2273

p.o. box 688
170 west providencia
burbank, california
HAND CARRIED

December 12, 1960

Director
Division of Licensing and Regulation
U. S. Atomic Energy Commission
Washington 25, D. C.

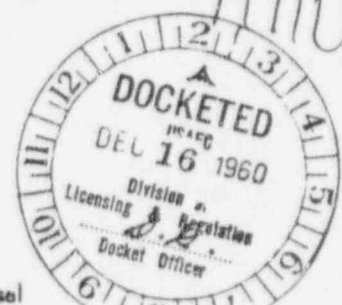
Reference: By-product & Source Material License 4-580-6

Dear Sir:

We respectfully request a variance in the above license. We have on hand 60, fifty-five gallon drums which are in use as storage containers for radioactive waste, generated by our company. The activity of this waste is such that the drums read more than 200 milliroentgens per hour at their surface.

The high radiation exposures, both external and internal, to which personnel would be subjected, sorting the radioactive waste in these drums to comply with ICC specifications would appear to be unnecessary in view of the fact that one carefully supervised shipment could accomplish their disposal. What we mean by "carefully supervised shipment" is as follows:

1. The drums would all be loaded on one truck, (semi trailer or dual trailer).
2. The truck would be leased by our company and we would have full control.
3. The driver would be a company employee.
4. The drums would be on pallets to facilitate loading and unloading and to give distance protection while loading with a fork lift.
5. By means of shielding, distance, and rotation, the truck driver and personnel loading and unloading this shipment would be protected from exposures greater than 300 millirem per week.
6. The shipment would be accompanied by a person qualified in radiation protection who would be authorized to enforce any required protection measures.



nuclear sources-labeled compounds-health physics-waste disposal

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7. Persons servicing the truck would not be allowed to remain within the restricted area around the truck for a sufficient time to receive 100 millirems radiation exposure unless they are our employees. If it is necessary to pack the truck for periods of time longer than that required for normal servicing the restricted area around the truck would be roped off and appropriately labeled.

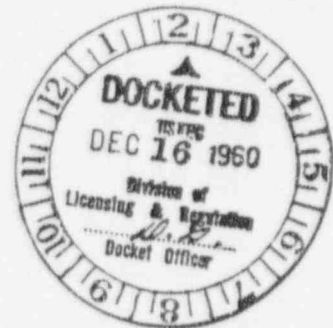
Other conditions relating to labeling of the truck, emergencies, etc. would be in accordance with our license. We cannot predict at this time the actual radiation level at the trailer surface. The restricted area would be determined of course by instruments.

It is our current intention to send this shipment to the land disposal facility in Idaho. If the commission gives a variance, a copy should be sent to the land disposal facility so that they will accept the shipment. There is a possibility that we will ship this material for sea disposal. In that event these drums would be loaded last on the barge and would be unloaded by cable first to reduce exposures during handling.

Very truly yours,

A. J. Moses
Chairman
Isotope Committee

AJM/cja





22-7
nuclear corporation of america

isotopes specialties company--division

victoria 9-2273

6755
wsc
p.o. box 688
170 west providencia
burbank, california

CERTIFIED MAIL

December 13, 1960

Mr. James R. Mason, Chief
Isotope Branch
Division of Licensing and Regulation
U. S. Atomic Energy Commission
Washington 25, D. C.

Reference: License no. 4-580-6

Dear Mr. Mason

This is the 20 day notice of our intention to dispose of radioactive waste at sea, location 32° 00' N latitude, 121° 30' W longitude.

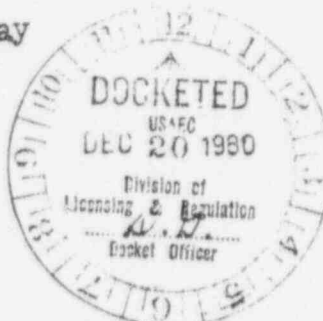
It is estimated that this load will consist of 1800 containers, a total activity of 80,000 millicuries of byproduct material, 1600 pounds of source material and 10 grams of special nuclear material.

Dock departure date will be January 5, 1961, weather permitting. Your office will be notified of the point of departure as soon as the necessary arrangements have been completed.

Very truly yours,

Alfred J. Moses
Alfred J. Moses
Chairman
Isotope Committee

AJM/cja
cc: Director
Div. of Inspection
U.S. A. E. C.
2111 Bancroft Way
Berkeley, Calif.



A/109

nuclear sources-labeled compounds-health physics-waste disposal
services and products for nuclear users

8012030309 IP



NUCOR NO. 27.7 6868
nuclear corporation of america

isotopes specialties company--division

victoria 9-2273

p.o. box 688
170 west providencia
burbank, california

December 20, 1960

Mr. James R. Mason, Chief
Isotopes Branch
Division of Licensing & Regulation
U. S. Atomic Energy Commission
Washington 25, D. C.

Dear Mr. Mason:

Receipt is acknowledged of your letter dated December 2, requesting additional information on our application for renewal of waste disposal license no. 4-580-6.

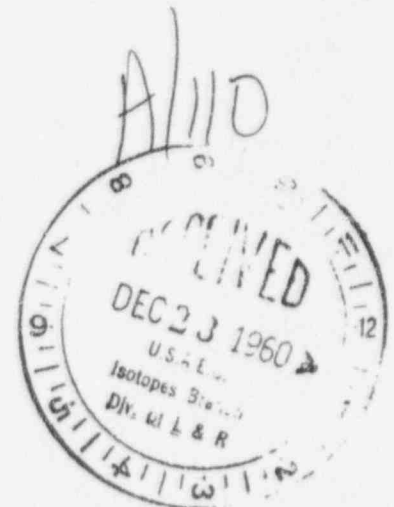
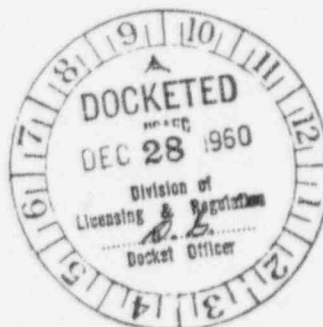
The Isotope Committee is working on the answers to the questions in the letter, however, in view of seasonal vacations, it is doubtful that our reply will be ready before the middle of January.

Very truly yours,

Alfred J. Moses

Alfred J. Moses
Chairman
Isotope Committee

AJM/cja



nuclear sources-labeled compounds-health physics-waste disposal

8012030300

IP

DOCKET NO. 22-7

6904

nuclear corporation of america *6-23*

isotopes specialties company--division

victoria 9-2273

p.o. box 688
170 west providencia
burbank, california

December 22, 1960

Mr. James R. Mason, Chief
Isotopes Branch
Division of Licensing & Regulation
U. S. Atomic Energy Commission
Washington 25, D. C.

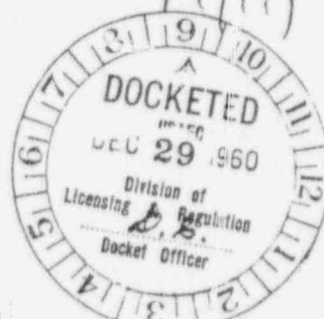
Dear Red:

Here is the information on the hot barrels: There is a maximum of 86 drums that read more than 200 milliroentgens per hour at the surface. These drums are filled with concrete. The radioactive material in all of these drums came from Isotopes Specialties Company's operations, not from customers. The majority of the waste was accumulated several years ago arising from the dismantling of the hot laboratory and during the original decontamination work at the 703 S. Main Street facility.

The distribution of surface readings of these drums are as follows:

<u>Milliroentgens per hour</u> <u>Surface dosage range</u>	<u>No. of drums</u> <u>Distribution</u>
300 - 400	31
500 - 1000	29
1100 - 2000	15
2100 - 3000	5
3100 - 6000	5

Only a few of the drums have isodose readings, and generally the maximum reading is found as a "hot spot".



isotopes specialties company--division

8012030034-2AP

Mr. James R. Mason
December 22, 1960

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The radioactive material in this lot of drums is Cesium 137, Cobalt 60, Radium 226; singularly or in any combination. Two drums contain more than 2700 millicuries; one with 7 curies of cesium 137, the other with 6 curies of cesium 137. The majority contain less than 100 millicuries of cobalt 60 or 100 millicuries of cesium 137 each. It would appear that the high surface readings are due to poor placement of the radioactive material. The total radioactivity of this lot of drums is about 25 curies.

It is our intent to dispose of all our accumulated waste as soon as possible. We would like to take these hot drums on the sea disposal trip scheduled for January 5, 1961. Please advise as soon as possible of your decision regarding our requested waste license variance to dispose of these hot drums. The following transportation procedure is planned for the hot drum shipment.

Truck loading would be accomplished by forklift. The "hot spots" on these drums would be turned inward to reduce exterior readings. Concreted drums of low activity would be used to further reduce readings at the truck body. While it cannot be determined without trial, we estimate that the reading of the exterior truck surfaces would not exceed 500 milliroentgens per hour. The truck driver would be protected by distance, time and shielding so that he would not receive an excessive exposure from radiation.

The truck hauling hot drums would travel non-stop from our facility to the dock and would be immediately unloaded directly to the barge. Our own men would be standing by to assist on the unloading of these hot drums to reduce exposure to the stevedores.

These drums would be the last loads from our facility. They would be placed in a reserved area on the outside edge of the barge. From this position they can be the first removed during the dumping operation. All of the high level drums would be marked with red X's to distinguish them from other drums.

Accidents during truck transportation would be handled at once by the accompanying monitor who would restrict the area to prevent exposure of citizens and until the material could be recovered. In the event of equipment failure the monitor would also restrict the necessary area around the truck to prevent exposure.

We are soliciting the help of the State Atomic Coordinator to facilitate shipment of this material.

Very truly yours,

J. D. Vaden
J. D. Vaden

