

DOCKET NO. 27-7

May 5, 1960

Mr. James R. Mason
Atomic Energy Commission
Isotope Division
Licensing and Regulation
Washington 25, D. C.

Dear Mr. Mason:

Attached are handling methods for large
radioactive containers. We hope that this
information will help you expedite our waste
disposal license change.

Very truly yours,

ISOTOPES SPECIALTIES COMPANY

A. J. Moses
Chairman
Isotopes Committee

AJM/cja
Enc.



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SAFE HANDLING METHODS

FOR

LARGE RADIOACTIVE WASTE CONTAINERS

Large radioactive waste containers will be handled with particular attention given to mechanical safety. The methods given below are to be used by ISC personnel and all other persons engaged in the handling of large radioactive waste containers where ISC retains responsibility for final disposition of radioactive waste.

I. Loading of large radioactive waste containers on trucks for transportation.

The large radioactive waste containers will be loaded on trucks by the use of mechanical lifting equipment such as fork lift trucks, cranes, booms with block and tackle or hydraulic lifts.

No large radioactive waste container will be loaded until it is determined that the calculated weight of the load is less than $2/3$ of the rated capacity of the lifting equipment.

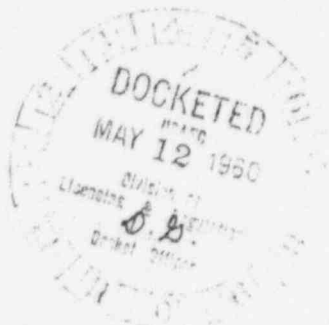
Loads will be lifted without the use of cables when using the fork lift. When cables are needed for lifting purposes appropriate slings shall be used and shall be rigged to prevent shifting, oscillation or loss of the load. Cables used must have a rated capacity of $1\ 1/2$ that of the calculated load weight.

All loads are to be lifted one foot above the ground and then checked for security of hold before loading onto the truck.

The calculated weight of the load on the truck shall not cause the rated gross weight of the truck to be exceeded. The loaded truck must be weighed at the nearest public scales before proceeding to the dock area.

II. Unloading of large radioactive waste containers from the trucks to the dock or directly onto the barge.

Trucks will not be driven onto docks until it is determined that the load bearing rated capacity of the dock will support the gross weight of the truck.



The large radioactive containers will be unloaded from the truck onto the dock or directly onto the barge. The lifting equipment used in the unloading operations shall be of equivalent load capacity to that which was used to load the truck.

Fork lift trucks, cranes, booms with block and tackle or hydraulic lifts will be used to unload the large radioactive containers onto the dock. In addition to this equipment winches, railways and sleds may be used to load large radioactive containers onto the barge.

III. Barge loading and unloading procedure.

The barges used for the transporting of large radioactive containers to the sea disposal site shall be certified for sea worthiness and load rating by an independent group of experts or by an official agency prior to departure. The barge will be a common flat type of steel or wood construction.

The large radioactive containers will be placed on steel roller rods along the sides of the barge. Chocks and cables will be rigged by stevedores to make fast the large radioactive containers. Deck rings, cleats, bits and stanchions will be used to secure cables holding the waste containers so that these loads will not shift in the event of foul weather.

IV. At the disposal site all tackle holding the large radioactive waste containers will be removed. Working from the sides of the barge the tug will make use of 1" tow lines to remove the large radioactive waste containers. The tow line will be passed behind a container and made fast to a cleat or bit, the tug will slowly pull away. The container, on the steel rolling bars, will be pulled over the side. This procedure will be repeated until all of the large containers are over the side.

V. Summary: A method has been described for sea disposal of large radioactive waste containers. All of the equipment mentioned in this method is readily available in any sea port. The procedure given for unloading the barge has been used successfully to unload large concrete mooring blocks weighing 7 1/2 to 20 tons and as large as 10' x 10' x 8'.

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