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MEANS FOR DISPOSAL OF ATOMIC WASTE

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This invention relates to means for disposal of atomic waste.

The principal object of this invention is to provide means for concentrating atomic waste material such as waste paper, gloves, rubbers, clothing, liquids, etc., which have been contaminated so as to be radio-active.

A further object is to provide means for storing within a container the greatest amount of material possible and to eliminate air spaces which would otherwise be space consuming areas.

A further object is to produce a weighted mass so that when the same is contained within a container it will have a mass weight of at least ten pounds per gallon as required by law, so that the container when immersed in a body of water such as an ocean area will sink to the bottom and thus be permanently disposed of without any possibility of radio-active contamination to the surrounding area.

Other objects and advantages will be apparent during the course of the following description.

Applicant is aware of the fact that contaminated material has been placed in containers such as drums of various capacities which drums have been in turn weighted with concrete so as to comply with the weight per gallon displacement of the drum, and that it has also been common practice to use various compacting means so as to fill the drum as full as possible. However, these means have always left remaining large interstices filled with air, and it is my intention to avoid these interstices, and to at the same time concentrate all of the waste material in such a manner that the material within the container becomes a homogeneous mass, which of itself would be self-supporting and not subject to easy disintegration even were it not confined within the container.

My invention consists in the mixing of radio-active waste material, or other material which could be radio-active, such as waste paper, gloves, rubbers, clothing, liquids, etc., which have been contaminated so as to be radio-active, in a mixer such as a concrete mixer, together with a liquid, which liquid can be water, oil, or radio-active liquid which it is desired to dispose of, together with an earthy or clayey material in an amount to provide a minimum density of ten pounds per gallon, and agitating the combined products until they have been shredded and the liquid has been absorbed by the earthy or clayey material to a point where there

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is practically no free liquid remaining, and the shredded material forms an interlocking, matted, conglomerate entirely free of voids mass.

This mass is then placed in a container such as, for instance, an oil drum, which drum may be sealed in any desired manner as with a cover, or with a plastic seal, after which the container and its contents may be readily transported to any desired disposal area.

Applicant has also found by experiment that there are certain earths or clays which may be added to the mixer so as to further solidify the mass and at the same time absorb any excess liquids in the mass.

It will thus be seen that I have accomplished all of the objects above set forth, and it is further to be understood that the form of my invention herein described is to be taken as a preferred example of the same and that various changes relative to material or mixing procedure may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. A method for disposal of atomic waste including a mixture of radio-active materials, such as waste paper, gloves, rubbers, clothing, liquids and the like, said method consisting of agitating the mixture of such radio-active materials in the presence of a liquid and clayey material in a mixer to effect shredding of the solids in the mixture and to form a plastic sustaining mass with all fibrous material interlocked and with the mass free of all voids when removed from the mixer.

2. In a method for disposal of atomic waste including a mixture of radio-active materials, such as waste paper, gloves, rubbers, clothing, liquids and the like said method consisting of agitating the mixture of such radio-active materials in the presence of a liquid and clayey material in a mixer to effect shredding of the solids in the mixture and to form a plastic sustaining mass with all fibrous material interlocked and with the mass free of all voids when removed from the mixer and confining said mass in a container for disposal at a remote point.

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