

RE: LETTER 1/15/62 A.E.C. BY NUSSBAUMER

1. The thorium is used in the manufacture of magnesium base-thorium alloys normally containing a nominal concentration of 3% thorium. Standard alloying, extrusion, rolling and fabrication practices are followed as with other magnesium alloys. Release of thorium into the air is possible only during alloying, chemical treatment, welding and grinding.
2. High ceilings with good natural ventilation through monitors exhaust fumes from alloying operations adequately.

The lip type ventilators or complete enclosures designed to safely remove acid and other chemical fumes from chemical treatment equipment also remove any thorium which may be entrained in the fumes or spray.

Measurements of airborne thorium in the breathing zone of operators of welding equipment indicate that normal convection and dilution in the shop air satisfactorily maintains the thorium concentration below the limits specified in 10 CFR 20. Individual exhaust installations as described in Dow Bulletin 141-179 are not necessary under our conditions of operation.

All grinding of magnesium-thorium alloys producing dust that might become airborne is done in conjunction with water wash dust collectors.

In all cases above, the capacity of the fume or dust removal equipment is designed to be adequate for the magnitude of the production operation.

3. All operations of the type described above have been surveyed to insure that airborne concentrations of thorium in the work areas are well below the standards specified in 10 CFR 20 and comply with our own regulations. Further surveys will be made as production methods change.

A-4