

Molycorp, Inc.

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UNI⁷⁶N
MOLYCORP

June 5, 1981

Warren N. Warhol
Vice President Manufacturing

Mr. John Hickey
Section Leader
Industrial Licensing
Source Materials
Nuclear Regulatory Commission
7915 Eastern Avenue
Silver Springs, MD 20910

Dear Mr. Hickey:

Molycorp, Inc. is in the process of assembling the data necessary to submit an application for a source materials license covering the operations at its rare-earth chemical plant in York, Pennsylvania. A copy of my letter promising that the components of this application will be submitted by September 15, 1981 is enclosed.

The Molycorp data shows that only one of our products, cerium fluoride-technical grade, typically contains thorium in concentrations of more than 0.25 per cent. Accordingly, we are notifying the domestic industrial consumers of this product that they must have source material licenses to hold more than 15 lb contained thorium at one time, and/or to process more than 150 lb contained thorium during a calendar year.

This letter is to inform you that (1) a small number of industrial consumers are involved, (2) they are being referred to your office if they need to apply for a source materials license, and (3) that I will be submitting to you further information on June 15, 1981 that you may find helpful to facilitate the approval of their license applications.

Sincerely,

Warren N. Warhol

WNW:jb

Attachment

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PDR ADOCK 040*****
C PDR

Encl 1

NO. 5380 CERIUM FLUORIDE
TECHNICAL GRADE

	<u>Typical</u>
Total Rare Earth Oxides (REO)	67.0%
CeO ₂	56.0
La ₂ O ₃	4.0
Nd ₂ O ₃	1.5
Pr ₆ O ₁₁	0.5
F	17.0
Cl	0.4
BaO + SrO	6.0
SiO ₂	2.0
CaO + MgO	2.0
ThO ₂	0.5
Loss on Ignition	10.0

All data and information furnished are believed to be reliable. No warranty of any kind, express or implied, however, is made as to its accuracy and completeness. Nothing contained herein shall be construed as a recommendation for use in violation of any patent and no responsibility is assumed by MolyCorp, Inc. with respect to any claim of infringement of a patent in such use.

eberline

EI-010535

June 8, 1981

Eric Thede
Union Molycorp, Inc.
P.O. Box 7600
Los Angeles, California 90051

Dear Mr. Thede:

Eberline analyzed a number of samples from your rare earths operations including the process fraction containing cerium fluoride. The work was intended to evaluate the radioactive isotopes and their concentrations in the material. The analytical results for the various radionuclides, principally natural uranium and thorium, were used to determine the maximum airborne dust concentrations above which no exposure should occur.

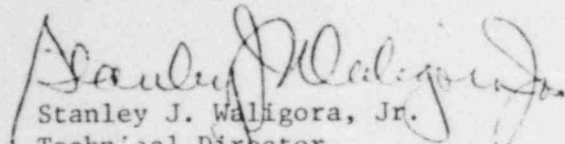
One means of evaluating the radiation dose due to inhalation is to compute an equivalence to the permissible airborne concentration based upon a mass per unit volume of air. To do this, one can compare the radiological concentrations of natural thorium and uranium in the cerium fluoride material to those levels which are considered acceptable for continuous occupational exposure based upon 10 CFR 20 of the U.S. Nuclear Regulatory Commission.

As a result of these calculations, a maximum acceptable level of 187 mg/M³ was determined for the cerium fluoride material.

Considering that the OSHA dust limit is 10 mg/M³ and that the generic TLV for fluoride compounds is 2.5 mg/M³, adherence to these limits will assure that employee exposure will be maintained well below the 187 mg/M³ limit based upon the radioisotope concentrations.

I trust this information is sufficient, however, please feel free to call upon me for any additional information which could be helpful.

Very truly yours,


Stanley J. Waligora, Jr.
Technical Director
Nuclear Services Division

cc: Dr. Rainer Beck, Molycorp
Warren Warhol, Molycorp
Nels Johnson, Eberline

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