



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

400 Seventh Street, S.W.  
Washington, D.C. 20590

MAR 13 2001

Mr. F. Kevin Reilly  
Director  
Defense Logistics Agency  
Defense National Stockpile Center  
8725 John J. Kingman Road, Suite 4616  
Ft. Belvoir, Virginia 22060-6223

Reference No.: 01-0064

Dear Mr. Reilly:

This is in response to your February 21, 2001 letter, inquiring whether your thorium nitrate hydrate may be offered for transportation as "Radioactive materials, LSA, n.o.s." under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180).

You state that because of its highly hydrated state, the material has solidified into a non-friable rock-like monolith mass inside the packages during storage. Also, you state that prior testing indicate the material does not meet the defining criteria for a Division 5.1 under the test protocol in the United Nations Manual of Test and Criteria, "Classification Procedures, Test Methods and Criteria Relating to Oxidizing Substances for Division 5.1."

Based on the information you provided, we concur that if the material meets the definition of Low Specific Activity (LSA) as defined in 49 CFR 173.403 and does not meet any other hazard class, it would be most appropriately described as "Radioactive material, LSA, n.o.s."

I hope this information is helpful. Should you have further questions, please contact us.

Sincerely,

Hattie L. Mitchell  
Chief, Regulatory Review and Reinvention  
Office of Hazardous Materials Standards



010064

172.101



DEFENSE LOGISTICS AGENCY  
DEFENSE NATIONAL STOCKPILE CENTER  
8725 JOHN J. KINGMAN ROAD, SUITE 4616  
FT. BELVOIR, VIRGINIA 22060-6223

Beatts  
§ 172.101  
Proper Shipping Name  
01-0064  
FEB 21 2001

IN REPLY  
REFER TO

DNSC-E

RSPA Office of Hazardous Materials Standards (DHM - 10)  
U.S. Department of Transportation  
400 Seventh Street  
Washington DC 20590-0001

Dear Sir or Madam:

The Defense Logistics Agency (DLA) Defense National Stockpile Center (DNSC) has over 2.3 million kg (5.1 million pounds) of  $\text{Th}(\text{NO}_3)_4 \cdot 5\text{H}_2\text{O}$  (thorium nitrate hydrate) in storage. Because of its highly hydrated state this material has solidified into a non-friable rock-like monolith inside the packages during storage. The thorium in this material has the naturally occurring isotopic distribution and has not been irradiated or isotopically concentrated.

The DNSC is considering transporting this material as part of a final disposition plan. Some prior testing of this material, performed at the direction of DNSC, indicates that the 5 hydrate form of thorium nitrate will not qualify as an oxidizer under the test protocol provided in the UN Manual of Test and Criteria "Classification Procedures, Test Methods and Criteria Relating to Oxidizing Substances for Division 5.1". If the UN Manual of Test and Criteria "Classification Procedures, Test Methods and Criteria Relating to Oxidizing Substances for Division 5.1" test protocol is performed on a representative sample of the  $\text{Th}(\text{NO}_3)_4 \cdot 5\text{H}_2\text{O}$  in the DNSC inventory and the material does not qualify as an oxidizer, can this material be classified, packaged, and shipped as "Radioactive materials, LSA, n.o.s"?

Sincerely,

F. KEVIN REILLY

Director,

Directorate of Environmental Management &  
Quality Assurance

Federal Recycling Program



Printed on Recycled Paper