



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 26, 2018

Mr. Robin DeLaBarre
Office of Nuclear Energy,
Safety & Security Affairs, Room 3320 HST
Bureau of International Security
& Nonproliferation
U.S. Department of State
2201 C Street, NW
Washington, D.C. 20520

Dear Mr. DeLaBarre:

Enclosed is an application (XMAT446), dated March 26 2018, received by the U.S. Nuclear Regulatory Commission (NRC), from Sigma-Aldrich Corporation for the export of 5,000 kg of deuterium (in the form of deuterium compounds, deuterium gas, and deuterium oxide) to their subsidiary (Sigma-Aldrich Chemical Company, Ltd.) in the United Kingdom for distribution into the medical, pharmaceutical, chemical, and industrial markets for non-nuclear end-uses. Most of Sigma-Aldrich's customers use these materials for scientific research.

In accordance with our mutual understandings documented in August 2016, "Processing applications for licenses for exports of deuterium," we would appreciate receiving your judgement as to whether:

- The facts of the proposed export are consistent with non-nuclear end use;
- The Executive Branch does not see a need for assurances from the recipient government; and
- The proposed export would not be inimical to the common defense and security of the United States.

Sincerely,

A handwritten signature in cursive script, appearing to read "Janice E. Owens".

Janice E. Owens, Acting Chief
Export Controls and Nonproliferation Branch
Office of International Programs

Enclosure:
Export License Application

cc w/enclosure:

K. Strangis, DOE/NNSA
J. Norles, DOE/NNSA
M. Shoemaker, NRC/NMSS
J. Semones, DHS/CBP

S. Aguilar, NRC/NMSS
M. Chen, DOE/NNSA
P. Dessauls, DOE/NMSS

R. Bennett, DHS/CBP
S. Clagett, DOC
E. Sauls, DTRA