



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

April 6, 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 (XMAT443), dated January 30, 2018, received by the U.S. Nuclear Regulatory Commission (NRC), from Vertex Pharmaceuticals Incorporated for the export of 5000 kilograms of deuterium to Shanghi SynTheAll Pharmaceuticals Co., Ltd., in China. Vertex plans to utilize the deuterium compounds to manufacture active pharmaceutical ingredients for use in clinical trials on treatments of cystic fibrosis.

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 black ink that reads "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. Dessaulles, DOE/NMSS

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