



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

September 20, 2013

Mr. Kevin Heaphy  
General Manager  
Superior Tube Company, Inc.  
3900 Germantown Pike  
Collegeville, PA 19426-3112

SUBJECT: JURISDICTION DETERMINATION FOR ZIRC ALLOY TUBES

Dear Mr. Heaphy:

This letter refers to your letter dated July 31, 2013 to the U.S. Nuclear Regulatory Commission (NRC) regarding a voluntary self-disclosure of possible violations. The potential violations you disclosed involved 1) failure to file reports required as a condition of reliance upon the general license at 10 CFR 110.26; and 2) failure to obtain a specific license covering a temporary re-export from Canada to Russia by Superior Tube's customer.

In May 2013, Superior Tube Company Inc. (Superior) submitted a license application to NRC for the export of Zirc alloy tubes first to Nordion, Inc., in Canada, and then to Russia, for ultimate use in a nuclear reactor at the Leningrad nuclear power plant for the production of Cobalt-60 radioactive sources. During the license review process, the NRC requested additional information about the end use of the Zirc alloy tubes because the application stated that the tubes would house Cobalt-57 slugs (inserted by Nordion) for irradiation in the reactor. Post irradiation, the tubes and Cobalt-60 created during irradiation would be returned to Canada for the production of Cobalt-60 sealed sources for medical-related end-uses. The NRC in consultation with the Department of State and Department of Commerce determined that the Zirc alloy tubes cited in the application cannot be classified as Section 109b. components under the Atomic Energy Act of 1954, as amended. A 109b. designation is not appropriate because, based on the information provided by Superior, the tubes are not especially designed or prepared for housing special nuclear material (fuel) inside the core of a reactor and are not "especially relevant from the standpoint of export control because of their significance for nuclear explosive purposes." Because these tubes are not 109b components, they are not under NRC's export licensing jurisdiction. As stated in an August 3, 2013 email from Ms. Jennifer Tobin, Export Licensing Officer, to Mr. Justin Knipe, Superior should consult with the Department of Commerce regarding the applicable export licensing requirements prior to exporting the tubes.

Your July letter also noted numerous exports of Zirc alloy tubes to Canada for use in commercial nuclear power plants under NRC's general export license in 10 CFR 110.26. The use of NRC's general export license (with the associated annual reporting requirement) is only required if the tubes are under NRC jurisdiction. In an August 29, 2013 email from Mr. Richard Matheny, Goodwin Procter LLP, to Ms. Jennifer Tobin, NRC, you clarified that of the exports listed in Attachment A of your letter, the Zirc alloy tubes were designed and prepared for use in

K. Heaphy

- 2 -

a nuclear reactor but not to house special nuclear material. The Zirc alloy tubes were exported to nuclear power plants in Canada and South Korea to house flux instrumentation. The additional information provided confirms that the exports included in Attachment A are not under NRC jurisdiction and thus no general license reports are required. NRC suggests that Superior consult with the Department of Commerce regarding the applicable export reporting and/or licensing requirements.

Please contact Mr. Jeffrey Cruz of my staff at (301) 415-0599 or [Jeffrey.Cruz@nrc.gov](mailto:Jeffrey.Cruz@nrc.gov) if you have any questions regarding this matter.

Sincerely,



Charlotte E. Abrams, Chief  
Export Controls & International Operations Branch  
Office of International Programs

cc:

R.L. Matheny III, Goodwin Procter LLP  
J. Knipe, Superior Tube Company, Inc.  
D. Holody, OE (Region 1)