



030-37764

January 19, 2010

Ms. Lisa Dimmick  
State Agreements & Industrial Safety Branch  
Division of Materials Safety & State Agreements  
Office of Federal & State Materials & Environmental Management Programs  
US Nuclear Regulatory Commission  
Washington, DC 20555-0001

Reference: Docket # 030-37764, Distribution License # 32-31005-01E

Dear Ms. Dimmick:

Based on the several telephone conversations we have had plus the clarification of requirements for gemstone import as given in US NRC Information Notice 2009-12, the following is offered for clarification of the relationship between Sterigenics domestic entities and the company's facility in Thailand.

The Sterigenics Thailand facility uses an electron accelerator to irradiate gemstones for customers from several countries, including the United States. In any of the operations involving gemstones, Sterigenics does not actually take any ownership of the gemstones. Instead, we return the irradiated gemstones to our customers following processing and never acquire the gemstones themselves. Our physical and legal possession of gemstones is only incidental to the irradiation service that we provide, which is also true of any irradiations that have been done in the past at the San Diego facility.

In relation to the distribution license for irradiated gemstones, the release of electron-irradiated gemstones from the Thailand facility will follow all of the procedures and commitments made in the license application and subsequent correspondence. For legal purposes, as we discussed on the telephone, the Sterigenics San Diego facility will be acting as the domestic agent for Sterigenics Thailand, with shipments returning to customers being documented and performed as being "in care of" the Sterigenics facility in San Diego, CA, which is within the US NRC geographic jurisdiction. Legal possession of the gemstones will be passed through the San Diego facility as the domestic agent of the Thailand facility, although physical possession of the gemstones themselves may not necessarily be assumed by the San Diego facility.

Copies of pertinent records on the gemstone irradiation process in Thailand and the measurements made for release of gemstones (i.e., gamma spectra) will be maintained at the San Diego facility for inspection by the US NRC. Copies of the relevant procedures and facility work instructions will also be available at the San Diego facility, as will relevant training records for individuals involved with the analysis and release of gemstones from the facility.

Currently, the San Diego facility is not processing gemstones and has not done so for a few years, dating back to before the US NRC assumed responsibility for electron-irradiated

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gemstones. As such, the instrumentation described in the license application is not present at the San Diego facility. If there is a decision to pursue this business again at the facility, the equipment would be purchased and be operational before any gemstones were irradiated. However, until that occurs, the specific equipment being used for gemstone release will only be present at the Thailand facility and will not be available for inspection in San Diego. Copies of the analysis (MCA) software can be made available, but the detector hardware itself will not be purchased until the facility determines that it will again irradiate gemstones. A description of the instrumentation and its specifications will be available for review.

Should you need further information, please contact me at the address or telephone number shown on this letterhead or by electronic mail at [msmith@sterigenics.com](mailto:msmith@sterigenics.com).

Sincerely,



Mark A. Smith, CHP  
Vice-President, Radiation Services

cc:  
P. Baker  
W. Trevithick  
C. Zinn