



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

March 30, 2021

Mr. Maurice Ostro OBE, KFO  
Ideal Source Quality Assurance  
401 Vandiver, Building 4, Suite 200  
Columbia, MO 65201

SUBJECT: REGULATORY REQUIREMENTS FOR IRRADIATED GEMSTONE UNDER  
TITLE 10 OF THE *CODE OF FEDERAL REGULATIONS* SECTIONS 30.14 AND  
32.11

Dear Mr. Ostro:

Thank you for your interest in the U.S. Nuclear Regulatory Commission's (NRC's) regulatory requirements concerning irradiated gemstones.

Some of the regulatory requirements for irradiated gemstone may be found in Title 10 of the *Code of Federal Regulations* (10 CFR) Sections 30.14 and 32.11. Additional guidance concerning license requirement for irradiated gemstones may be found in NUREG-1556, Volume 8, Revision 1, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Exempt Distribution Licenses." These regulations require that each person engaging in the initial transfer of irradiated gemstones must have a license from the NRC authorizing transfer under 10 CFR 32.11 and a possession license from either the NRC or Agreement State for the possession or use of the radioactive material. As a condition of the distribution license, the stones are required to be tested for residual radioactivity.

The NRC is aware of two arrangements for the importation of irradiated gemstones that appear to meet the NRC's regulatory requirements. The first of these arrangements is that the importer of the stones has either an NRC or Agreement State license to possess and an NRC license to distribute the stones. The licensed importer receives the stones from outside the United States and either tests the stones itself or sends the stones to an NRC licensed testing lab for testing. Following testing, the importer can sell the stones to others. Subsequent possession and subsequent sales of the stones would not require licenses. This arrangement would comply with regulatory requirements because the first person in the United States to possess the stones has a possession license; the stones are tested prior to distribution by a licensed facility; and the first distributor of the stones (the importer) has an NRC license. Subsequent possession and distribution do not require a license.

The second arrangement is where the importer does not possess NRC licenses to either possess or distribute irradiated gemstones. In this case the importer purchases the irradiated stones from a source outside the United States and has the stones sent directly to a licensed testing laboratory (i.e., the importer dropships the gemstones to the licensed testing lab). The licensed testing laboratory tests the stones and then ships them to the importer along with documentation of the test results. The importer can then distribute the stones to others within the United States. This arrangement appears to comply with NRC regulations in that the first person to possess the stones within the United States is the licensed testing laboratory and the

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initial distribution of the stones is the shipment of the stones from the testing laboratory to the importer. Given that the importer is neither the first person to possess the stones in the United States nor the first person to distribute the stones (the laboratory was), the importer may further distribute the stones without an NRC licenses.

This letter will be made available to the public in the NRC's Agencywide Documents Access and Management System as ML21089A160. If you have questions concerning the content of this letter or other questions concerning the regulatory requirements for irradiated gemstones please contact Ms. Shirley Xu of my staff at [Shirley.Xu@NRC.gov](mailto:Shirley.Xu@NRC.gov).

Sincerely,

David Alley, Branch Chief  
Materials Safety and Tribal Liaison Branch  
Division of Material Safety, Security, States,  
and Tribal Program  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 030-39136  
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**\*via email**

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