

October 31, 2003

Iain Daniels, Laboratory Manager  
Lionville Laboratory, Inc.  
208 Welsh Pool Road  
Exton, PA 19341-1313

Dear Mr. Daniels:

In your May 6, 2003, letter to the Office of the General Counsel of the U.S. Nuclear Regulatory Commission (NRC), you requested a clarification of the weight limits related to the possession limits for source material under 10 CFR 40.22(a). Following our June 18, 2003, letter responding to your request, you asked for additional clarification of a statement in our response addressing the responsibility of licensees to make technical judgements regarding the composition of their samples in order to accurately assess the weight of the uranium and/or thorium in the samples.

As stated in our earlier response, source material is defined in the Commission's regulations at 10 CFR 40.4 and has a two-prong definition. The first prong addresses source material (uranium or thorium or any combination thereof) in any physical or chemical form. The second prong addresses source material as an ore. Your second request for clarification was made in connection with the first prong of the definition which is based on the weight of the uranium or thorium. Because a licensee must include within the 15/150 pound limit all the source material received in its business services, licensees must make technical judgements regarding the composition of their samples in order to accurately assess the weight of the uranium and/or thorium in the samples. As noted in the June 18, 2003 letter, if an assessment is not possible when, for example, the uranium and/or thorium is distributed throughout the sample and commingled with the other constituents in the sample, then the weight of the sample itself must be used as the weight that is applicable to the exemption limits for "small quantities" in 10 CFR 40.22(a). However, if the weight of the uranium and/or thorium in the sample can be calculated (e.g., it is internally screened) or is provided (e.g., the sample is sent with client-supplied data on the isotopes present in the sample), even when the uranium and/or thorium is distributed throughout the sample and commingled with the other constituents in the sample, then the known weight of the uranium and/or thorium can be used to determine whether the sample falls within the exemption for "small quantities" in 10 CFR 40.22(a).

If you have any additional questions regarding this response, please feel free to contact Maria E. Schwartz, of my staff, (301) 415-1888 or mes@nrc.gov.

Sincerely,

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Stuart A. Treby  
Assistant General Counsel  
for Rulemaking and Fuel Cycle