

December 6, 2011

MEMORANDUM TO: Raymond K. Lorson, Director  
Division of Nuclear Materials Safety  
Region I

FROM: Brian J. McDermott, Director **/RA/**  
Division of Materials Safety and State Agreements  
Office of Federal and State Materials  
and Environmental Management Programs

SUBJECT: TECHNICAL ASSISTANCE REQUEST, TRACERCO,  
LICENSE NO. 07-28386-01

I am responding to your technical assistance request (TAR) dated November 7, 2011.

Issue:

In the TAR, dated November 11, 2011 (ML112550453), Region I requested assistance in determining whether an application for a license amendment to fabricate underwater detection devices by Tracerco requires a sealed source and device (SSD) evaluation and if the requested licensing action requires an environmental assessment.

Actions:

Based on our review, the licensee's request requires the submittal of a SSD evaluation. Furthermore, this action appears to require an environmental assessment in accordance with the provisions of 10 CFR Part 51. We agree with question 15 of the draft request for additional information attached to the TAR requiring the licensee to demonstrate that their proposed activities will not significantly affect the environment.

Background:

Tracerco submitted an application for a license amendment (ML112550466), dated September 9, 2011, requesting authorization to fabricate a family of underwater detection service (UDS) devices to be installed on a remote operated vehicle (ROV). The devices are intended to perform flooded member inspection, pipeline scanning for hydrates and solids blockage, pipeline integrity gauge location, and liquid level detection. These activities are intended to be performed in inland, coastal, and offshore waters.

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The UDS devices are to be stainless steel gauges that can have various configurations depending on the specified application. Tracerco has stated that a source housing containing registered sealed sources will be installed in the UDS devices in a water tight container. The UDS devices will contain one or multiple sealed sources not to exceed a total of 200 millicuries. At the locations of use, Tracerco staff will be onsite to attach the source housing into the UDS device. A third party may be operating the ROV. Tracerco cites NUREG 1556, Volume 3, Rev. 1, Section 5.1.3 as justification for not requiring a SSD review.

Discussion:

The requirements for an exemption from a custom SSD review are outlined in NUREG 1556, Volume 3, Rev 1, Section 5.1.3. This Section states that SSD reviews are not required when the device contains less than 200 millicuries of radioactive material, but this Section also lists a number of additional criteria for the exemption such as:

- the licensing reviewer has made a determination that the applicant is qualified by training and experience and has adequate facilities and equipment to safely use and handle the requested material in unsealed form; thus, the applicant would not have to rely on the intrinsic safety of the sealed source or device; and
- new custom evaluations must be performed when the custom devices are transferred to new locations because the environment of use may be different at each location.

Based on our evaluation of the materials submitted, Tracerco has not demonstrated the adequacy of facilities and equipment to safely handle the source in an unsealed form either at their home facility, or at user sites. Such a demonstration is essential because the use of these devices are intended to be underwater at different customer locations, in flood areas and offshore, and under partial control of third parties. Furthermore, the registered sealed sources Tracerco is proposing to use have not been reviewed for use in the conditions described in the application. The proposed use of these devices should undergo a full SSD engineering evaluation as described in 10 CFR 32.210 and NUREG 1556, Volume 2, Revision 1 to be used as a custom device series.

Additionally, the proposed use of this device is unique to previously requested gauging devices for use on land. Tracerco should demonstrate that their device meets the criteria for a categorical exclusion as described in 10 CFR 51.22(c). If their device does not meet any of the criteria, they must submit an environmental assessment in accordance with 10 CFR 51.21.

The UDS is a stainless steel apparatus that can have different configurations depending the specified application. Tracerco has stated that a source housing containing registered sealed sources will be attached to the UDS in a water tight container. The UDS will contain one or multiple sealed sources not to exceed a total of 200 millicuries. At locations of use, Tracerco staff will be onsite to attach the source housing to the UDS. A third party may be operating the ROV. Tracerco cites NUREG 1556, Volume 3, Section 5.1.3 as justification for not requiring a SSD review.

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