



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

August 31, 2011

U.S. Army Corps of Engineers
Engineer Research & Development Center
Waterways Experiment Station
ATTN: John A. Lindigrin
Radiation Safety Officer
3909 Halls Ferry Road
Vicksburg, MS 39180-6199

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION

The NRC has completed the technical review of the application dated July 12, 2011, in which the Engineer Research & Development Center is requesting authorization for the possession, storage and use of a sealed source (100 millicuries of cesium 137) contained in a Mount Sopris Instrument Company, Model 2GDA-1000 DX Series, well logging density probe. The proposed use of the density probe is for research and development to determine the density of subsurface soils. Please provide the following information for NRC review.

1. Provide sealed source and device registration (SSDR) certificate or certificate number for the Mount Sopris Instrument Company, Model 2GDA-1000 DX Series, well logging density probe. If the manufacturer or distributor indicates that there is no SSDR certificate then state so.
2. 10 CFR 20.1501(c) states that all personnel dosimeters that require processing to determine the radiation dose and that are used by licensees to comply with § 20.1201 must be processed and evaluated by a dosimetry processor holding a current personnel dosimetry accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology, and be approved in this accreditation process for the type of radiation included in the NVLAP program that most closely approximates the type of radiation for which the individual wearing the dosimeter is monitored. The application states that TLD badges will be analyzed by the U.S. Army Aviation Missile Command. Provide documentation that the U.S. Army Aviation Missile Command is currently accredited as a dosimetry processor by NVLAP.
3. Provide all the information described in page D-9 of NUREG-1556, Volume 14 regarding "Radiation Monitoring Instruments" and "Calibration of Radiation Detection Instruments". Indicate the type of survey meters possessed and indicate if the survey meter calibration is going to be performed by the manufacturer or in-house. If the calibration is going to be performed in-house, provide calibration procedures (see Appendix N of NUREG-1556, Volume 14) for NRC review and approval.

NUREG-1556, Volume 14 can be found at: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/v14/>

4. Provide instructions for handling licensed material (sealed sources) in wells without surface casing for protecting fresh water aquifers.
5. Provide procedures for picking up, receiving, and opening packages containing licensed materials, in accordance with 10 CFR 20.1906.
6. Provide procedures describing semiannual maintenance of well logging density probe as described in 10 CFR 39.43(b).
7. The application states that ERDC employees will not remove the encapsulated source from the source holder. The density probe manual states that in order to take the leak test sample, the user needs to remove the source from the source holder. Indicate how the licensee is going to obtain the leak test sample. Provide procedures that will be followed (manufacturer's procedure or alternate procedure) and training documentation of the individual that will perform the leak test sampling, for NRC review and approval. The training documentation should provide evidence that the individual has experience with the radiation safety aspects of handling an unshielded sealed source.
8. The application states that analysis of the leak test sample will be performed by the U.S. Army Public Health Command. Provide copy of the NRC license (or make reference to the NRC license number) that authorizes the analysis of leak test samples by the U.S. Army Public Health Command.

Please provide your response within 20 business days from the date of receipt of this letter. Make reference to mail control number 575611 when providing your response.

Thank you for your cooperation.

Sincerely,

/RA/

Roberto J. Torres, Senior Health Physicist
Nuclear Materials Safety Branch B

Docket: 030-05061
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