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RE: Renewal NRC License No. 52-25430-01
Mail Control No. 610717
Request for additional information.

1. This is to confirm under Item 3 of my application, that I am requesting authorization to use or possess licensed material at temporary jobsites.
2. Items 5 and 6 of Form 313 - This is to confirm current license authorization to possess analytical samples, Tc-99m, and F-18 in any form at my facilities located at Paseo de la Fuente, D-4 Calle Tivoli, San Juan, Puerto Rico and at temporary job sites of the licensee anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.
 - a. This is to confirm that environmental samples are going to be analyzed at temporary jobsites and they will be analyzed at my authorized location as well. The types of environmental samples that will be analyze will be wipe. The equipment that will be used to analyze the samples will be a Beckman Gamma Counter or Perkins Wallace2 Gamma counter and a Beckman LS 6500 LSC. Samples will be counted with an open window.
 - b. This is to confirm that Tc-99m and F-18 will be possessed and used only at temporary jobsites during services provided to customers. The Tc-99m (20-33 mCi) and F-18 (0.2 mCi) that is injected into the Jaszczak SPECT Phantom will not be drained from the phantom but allowed to decay to background. The decay process will take place inside a 5 gallon DOT approved plastic pail (UN 1H2/Y30/S/13 or UN 1H2X11.5/S/13) stored at Paseo de la Fuente, D-4 Calle Tivoli, San Juan, Puerto Rico facility. This is to confirm that the Tc-99m and F-18 will not be removed from the Jaszczak Spect Phantom at my permanent location.

3. This is to confirm that I am requesting authorization to perform calibrations (“E”) and service/repair (“I”) for all of the models listed in the “Sealed Source Registration” for each manufacturer CPN, InstroTek, Troxler, Humboldt, and Seaman Nuclear.
4. This is to confirm that I am requesting authorization to perform the same services for Seaman Nuclear portable gauges currently authorized on my license. Models C-75A, C-200, and C-300 or as listed in the “Sealed Source Registration”.
5. This is to confirm that I am withdrawing my request to perform waste management services but I am only consolidating and returning unneeded sources to the manufacturer for customers. Please note that returning unneeded sources to the manufacturer has a time limit of three months without occurring a disposal fee.
6. Please add to Item 7.2 the following:
 - a. I reserve the right to revise the training outlines, your examination, and your “Principles of Radiation Protection” document, as appropriate.
 - b. I confirm that your training program for portable gauge users will comply with the requirements of NUREG 1556, Volume 1, Rev. 2, “Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Portable Gauge Licenses, Final Report”, Appendix C, including 70% passing rate for an appropriate examination.
7. Item 9, “Facilities and Equipment”:

Survey meter calibration

 - a. Area diagram is attached. Description: the calibration facility is located on the second floor (no floors above) on an eight foot counter top with no adjacent building within 20 feet. The Amersham calibrator faces the outside wall. The Amersham calibrator is placed within a 2 inch lead cave that surrounds all three sides while the calibrator is being used. David Rhoe is the only person authorized to handle/use the Amersham calibrator. During the calibration procedure, access is restricted to all personnel. As an additional radiation precaution, a push cart is placed between the counter top and the operator. The cart serves two purposes, a. increasing the distance from the radiation source/beam, b. providing a mobile work platform for the survey meter and paperwork. In storage, the Amersham calibrator is locked inside the base cabinet of a fume hood. The calibrator is surrounded by 2 inch lead bricks on all four side to keep exposure to background levels.
 - b. The shielding materials (2-inch lead) will be used to shield the Cs-137 source in storage and once it is removed from the storage cabinet. The lead is placed in a U-shape design to shield all personnel that may walk bye while calibrations are being performed. While in storage, all four sides are surrounded by two inches of lead. The calibration source is stored inside a fume hood with lockable doors.

The office area provides a secondary lock during afterhours to prevent unauthorized source removal.

- c. This is to confirm that no specialized handling tools or protective clothing are required associated with the servicing of portable gauges services you intend to provide.

Nuclear gauge calibration

- Area diagram is attached. Description of the calibration facility: there are four calibration blocks used to calibrate a nuclear gauge. The three with holes and the forth without. These four blocks are located farthest from all personnel in the house. The calibration is perform by lowering the radiation source into the calibration block and taking measurement. During the counting process, I station myself on the opposite side of the garage until the counting process is complete. Once the calibrations are completed, the nuclear gauges are placed in storage either inside the storage room or inside the shipping case waiting for pickup. The nuclear gauges that are ready for pick-up are locked to a chain as an entry layer of security.
 - a. For equipment that needs to be serviced, the equipment is located inside the storage room that has two locks on the doors. The nuclear gauges that require the source rod to be removed is placed inside a 2 inch well with a lead plate to minimize radiation exposure from the unshielded source. No additional safety equipment is required.
 - b. The shielding materials (2-inch lead) will be used to shield the Cs-137 source rod once it is removed to service the guide tube assembly. The lead shielding stands 14 inches high with a 1.5 inch top to minimize the top opening. The storage room has two locks to prevent unauthorized source removal.
 - c. This is to confirm that no specialized handling tools or protective clothing are required associated with the servicing of portable gauges services you intend to provide.

8 This is to confirm that instrument calibration procedures will meet the requirements of Appendix F of NUREG-1556, Volume 18, Rev. 1. The calibration procedure for personnel dosimetry equipment is as follows:

1. Place the pocket dosimeter in a 160 mR/hr field.
2. Calculate the mR/min dose rate. ($160 \text{ mR} / 60 \text{ min} = 2.66 \text{ mR/min}$)
3. Take measurements 1, 2, and if needed at 3 minutes.
 - a. 1 min = 2.6 mR
 - b. 2 min = 5.2 mR
 - c. 3 min = 7.8 mR

4. Verify that the measured readings are within 20 % of the calculated measurement.

9. Item 10.3, "Radiation Monitoring Instruments", instrumentation used for analysis of environmental samples, leak tests, or other media will be a Gamma counter (Perkin Elmer Wallace2 Wizard 2) and a Liquid Scintillation Counter (Beckman LS6500). Instrumentation used for area surveys will be a GM survey meter (Ludlum model 14C or 2401EW, or 2401P)

10. This is to confirm surveys that we will perform and maintain contamination levels in accordance with the survey frequencies and contamination levels published in Section 8.10.4 of NUREG-1556, Volume 18, Revision 1.

11. This is to confirm that leak testing and sample analysis will be done in accordance with the model procedures in Appendix G of NUREG-1556, Volume 18, Revision 1.

12. This is to confirm that I will perform non-routine portable nuclear gauge maintenance in accordance with the criteria provided in Appendix F of NUREG-1556, Volume 1, Revision 1 except that extremity monitoring devices will not be used or needed.

- When the source rod is removed, the handle on the source rod is used to transport the source. This method keeps the hands 20 plus inches away from the unshielded source.
- Source removal to shielded storage container takes less than 15 seconds.
- In place of using a survey meter, a pocket dosimeter that is set to alarm at 2 mR/hr will be used. This method prohibits the user from turning off the sound.
- Based on the above, annual dose limits for 2018 have been less than 100 mRem per year.