



**March 2009****GWU Broad Scope Amendment License No. 08-00216-22**

2. Regarding our request to add the sealed sources described below, we can add the following new information (BOLD type);

**RADIOACTIVE MATERIAL**

	a. Byproduct material Element and mass number,	b. Chemical and/or Physical Form.	c. Maximum Amount which will be possessed at any one time.
2.1	<b>Radium 226</b>	Sealed source manufactured by <b>Monsanto</b> Research Corporation with further <b>encapsulation</b> in stainless steel and identified as <b>Type 274</b> by <b>LKB Wallac Oy</b> for use in a <b>Wallac RackBeta 1217/1218</b> liquid scintillation counter <b>SSDR: MD-0741-S-102-S</b>	No source to exceed <b>0.01 millicuries</b> <b>0.02 millicuries total</b>
2.2	<b>Radium 226</b>	Sealed source consisting of a <b>cylindrical steel rod 23 Em (L) x 1 cm (D)</b>	No source to exceed <b>0.01 millicuries</b> <b>0.02 millicuries total</b>

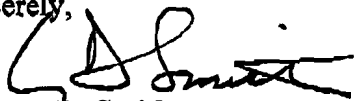
The sources in item 2.2 above are in good condition and are strong welded construction (double stainless steel encapsulation) and able to sustain use as an instrument check source. The sources are gamma sources with most beta emissions and all alpha emissions stopped in the steel encapsulation, Leak tests of these sources have been performed using both a standard leak test method and a 24-h radon emanation test with less than 0.001 uCi (alpha) detected. We have conducted a visual examination of the sources in item 2.2, they are not marked with any identification such as manufacturer or model number or any other identifying numbers or information. Our assay of these sources shows that they each have an activity of less than 10 microcuries.

The sources described above in Item 2.1 are to be used in the **Wallac LKB Model 1217** and **1218 liquid scintillation** counters for automatic determination of quench and the sources in Item 2.2 are to be used by GWU for calibration and checking of low radiation surveying and monitoring instruments (specifically checking of a wall mounted area monitor).

We will follow the leak test procedure and provide training to personnel regarding operating and emergency procedures regarding the use of these sources as submitted in our broad scope license application,

If you need any additional information or clarification please contact Daniel Hibbing, Sr. Radiation Safety Technician or Gregory D. Smith GWU Radiation Safety Officer, CHP at 202-994-2630.

Sincerely,



Gregory D. Smith, CHP

Radiation Safety Officer for George Washington University