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Shirley Xu  
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37-07939-01  
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12-18-06

Dear Ms. Xu,

Over the last 20 years, 10 CFR 31.11 materials have not been in use at St. Lukes Hospital or in any campus of St. Lukes Health Network. Prior to that, at the Bethlehem Campus only, the only byproduct material used was I-125 (60 day half-life), which was used in thyroid hormone and radioimmunoassay (RIA) test kits containing a total of 10 uCi (each) for in vitro testing with a multi-sample well counter. This technology was replaced about 20 years ago by enzyme immunoassay, a non-radioactive tracer methodology. The hormone assay and radioimmunoassay kits were available to NRC General Licensees originally, but some license reviewers, finding that stockpiles of the kits often exceeded 100 uCi, recommended that the NRC Specific Licensee amend its license to include up to 3 mCi of I-125 for test kits under the auspices of 10 CFR 31.11. St. Lukes Hospital had done this. Upon the decision to no longer utilize I-125 radioactive tracer in vitro testing of immunoassay kits, the Pathology Lab, where these test were performed, performed its last radiation safety survey and wipe test. This documentation was indeed "close-out survey" information. However, at this time, 20 years later, we no longer have those "close-out survey" records, but we attest that they, indeed, we performed. Since any residual radioactive material remaining today would have decayed over 100 half-lives, starting at no more than 10 uCi, the residual today must be consistent with background, and below regulatory concern. These Pathology Lab operations often possessed I-129 rod sources (called I-125 simulation sources) for quality control testing. These sources are exempt quantities of less than 100 nCi. When Pathology Lab RIA testing ceased, these type sources were usually transferred to the Nuclear Medicine Departments for inventory and control. Today, two such sources are in St. Lukes Hospital (Bethlehem Campus) Nuclear Medicine Department sealed source inventory. They are NRC regulation-exempt sources. These sources can be possessed by members of the general public, without licensure.

Sincerely,

Walter L. Robinson, M.S., A.B.S.N.M. & A.B.M.P. with A.B.R. (Eq.)  
Radiation Safety Officer  
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Lisa Dutterer,  
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139601  
NMSS/RGNI MATERIALS-002

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