UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

March 18, 2013

Docket No. 030-33025 License No. 06-30007-01
Control No. 580090

K. Paul Steinmeyer
President and Radiation Safety Officer
RSA Laboratories
Division of Radiation Safety Associates, Inc.
P.O. Box 107
Hebron, CT 06248

SUBJECT: RSA LABORATORIES, REQUEST FOR ADDITIONAL INFORMATION CONCERNING APPLICATION FOR RENEWAL OF LICENSE, CONTROL NO. 580090

Dear Mr. Steinmeyer:

This is in reference to your application dated February 20, 2013, requesting to renew Nuclear Regulatory Commission License No. 06-30007-01. In order to continue our review, we need the following additional information:

1. Section 5.1.b of your application requests to be licensed for unsealed special nuclear material (SNM) for 10 microcuries per radionuclide and 100 microcuries total. However, note 1 of your application states to restrict material to below the minimum limit specified in 10 CFR 70.25(d). For most SNM radionuclides, such as U-233 U-235 and Pu-239, 10 microcuries is maximum allowed per radionuclide, and the unity rule must be used if multiple radionuclides are possessed. Please request a smaller total amount of radioactive materials, or specify the radionuclides to be authorized at greater amounts than 10 microcuries and yet be below the minimum limit specified in 10 CFR 70.25(d).

2. In section 5.1.d of your application, you did not supply the manufacturer and model number of the sealed sources. 10 CFR 30.32(g) requires that the manufacturer and model number be submitted as registered in the sealed source and device registry or contain the information identified in 10 CFR 32.210(c) of this chapter. Beta gamma sources of 1 millicurie or less and alpha sources of 10 microcuries or less only require the applicant to supply the manufacturer, model number, radionuclide, and quantity.

   Alternately, if it is not feasible to identify each sealed source and device individually, the applicant may propose constraints on the number and type of sealed sources and devices to be used and the conditions under which they will be used, in lieu of identifying each sealed source and device.

   Other acceptable information for sources or devices manufactured before October 23, 2012, that are not registered with the Commission under 10 CFR 32.210 of this chapter

or with an Agreement State, and for which the applicant is unable to provide all categories of information specified in § 32.210(c) of this chapter, the application must include:

(i) All available information identified in 10 CFR 32.210(c) of this chapter concerning the source, and, if applicable, the device; and

(ii) Sufficient additional information to demonstrate that there is reasonable assurance that the radiation safety properties of the source or device are adequate to protect health and minimize danger to life and property. Such information must include a description of the source or device, a description of radiation safety features, the intended use and associated operating experience, and the results of a recent leak test.

a. Section 5.1.i of your application did not include the manufacturer and model number of the sealed sources you wish to be licensed. Please include the information as stated above for this item.

b. Section 5.1.j of your application did not include the manufacturer and model number of the for the byproduct sealed sources you wish to be licensed. Please include the information as stated above for both these items.

c. Section 5.1.j of your application combines both byproduct and special nuclear material into one line of authorization on your license. Byproduct material sealed sources need to be identified by manufacturer and model number while special nuclear material does not. Please make separate requests for these two materials. Please note that these will be listed as separate line items on the renewed license.

d. Section 5.1.k of your application states the model number as 770302 which appears to be the source rod assembly. Please confirm that the source is a model CDC.800 series.

e. Section 5.1.l of your application gives a model number of AMN9118. This model number could not be located within the sealed source and device registry. Please submit the sealed source registry number if know or other information to determine that it is registered. Alternately please see the options as stated in item number 1.

3. Section 5.1, Note 1, of your application, states that you will maintain inventory levels below the requirements for establishing financial assurance. Please confirm that you have an inventory system that will ensure that the inventory will be maintained below those requirements, and that the unity rule calculation is used to demonstrate you do not require financial assurance.

4. Section 5.5.1 of your application states your understanding of certain rules. For generally licensed material, you need to follow the requirements of the general license. Some general license regulations may include inventory requirements, for example, 10

CFR 31.5(c)(13)(iii)(c) has an inventory requirement. You do not need to respond to this item.

5. Section 6.1, item D of your application, you did not request performance of training as an authorized use as currently licensed. Please confirm if you do, or do not, wish to remove training as an authorized activity.

6. Section 6.1, item J of your application, you did not request: (1) Locking/unlocking shutter and turning it on/off; (2) Testing for proper operation of the shutter and shutter position indicator; (3) Performing initial and periodic radiation field surveys; (4) Removal and reinstallation of the gauge; and (5) Receipt of non-leaking sources from clients for evaluation. Please confirm if you do, or do not, wish to remove these authorized uses from the license.

7. Section 6.4 states that samples related to decontamination and decommissioning activities may be analyzed. Please specify if your authorized uses should include decommissioning as a service to others. You may wish to review the NRC's Policy and Guidance Directive FC 94-02, Licensing Site Remediation contractors for Work At Temporary Job Sites"" in ADAMS, using Accession No. ML003780888.

8. Section 9 of your application describes your facilities. Section 8.9 of NUREG-1556, Vol. 18, 'Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Service Provider Licenses,' states that applicants requesting the use of unsealed radioactive material describe the permanent facilities and equipment to be made available at each location where unsealed radioactive material will be used or handled. They should include a description of the area(s) assigned for the receipt, storage, security, preparation, handling, waste storage and measurement of radioactive materials. Submit a facility diagram showing the proximity of licensed materials to unrestricted areas. Drawings, sketches, diagrams, etc. should indicate the scale, or include dimensions on each drawing or sketch. The facility for decontaminating thorium lens was sufficient but please provides the information about the facilities where unsealed materials will be used at your Hebron facility.

9. You did not provide a leak test program for your own sources. As requested in Section 8.10.8, NUREG-1556, Vol. 18, 'Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Service Provider Licenses,' provide one of the following statements:

   - "Leak tests, when required by the license, will be performed at intervals approved by NRC or an Agreement State and specified in the Sealed Source and Device Registration Sheet. Leak tests will be performed by an organization authorized by NRC or an Agreement State to provide leak testing services to other licensees or using a leak test kit supplied by an organization authorized by NRC or an Agreement State to provide leak test kits to other licensees and according to the kit supplier's instructions."

   OR

   - "Leak testing will follow the model procedures in Appendix O." Or state: "Leak testing procedures and analysis will be done by the applicant." With this

statement, also provide the information in supporting a request to perform leak testing with information similar to Appendix O.

10. Section 10.3.3 states that the action level for decontaminating your thorium facility will be 50 disintegrations per minute per 100 square centimeters area (50 dpm/100 cm^2). Section 10.5 states that the action level for alpha contamination during routine surveys will be 20 dpm/100 cm^2. Confirm if you intend to use different action levels for thorium and the other alpha emitters, and justify the higher value, in consideration of the NRC screening value of 7 dpm/100 cm^2 for thorium on building surfaces for release for unrestricted use.

11. Section 11.2 states that material that is soluble or readily dispersible will be released to the sanitary sewerage system. Please note that the 10 CFR 20.2003 allows only readily soluble materials to be released to the sanitary sewerage system, or readily dispersible biological materials. Confirm that you will dispose of only readily soluble material or readily dispersible biological materials to the sewerage system.

12. Section 11.3 c. of your applications states that contaminated samples with quantities or concentrations of radioisotopes(s) that are less than the quantities or concentrations listed in 10 CFR 30 Schedule A and B will be disposed of individually in normal trash. Licensed material (i.e. source, special nuclear material, or byproduct material received, possessed, used, transferred or disposed of under a general or specific license issued by the Commission) must be disposed by the requirements of 10 CFR Part 20 and not Part 30. This information is detailed in Health Physics Position (HPPOS) 43 http://www.nrc.gov/about-nrc/radiation/protects-you/hppos/hppos043.html and HPPOS 190 http://www.nrc.gov/about-nrc/radiation/protects-you/hppos/hppos190.html.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Med, Ind, & Academic Uses;** then **Licensee Toolkits, see our toolkit index page.** You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

We will continue our review upon receipt of this information. Please reply to my attention at the Region I Office and refer to Mail Control No. 580090. If you have any technical questions regarding this deficiency letter, please call Dennis Lawyer at (610) 337-5366.

The NRC's Safety Culture Policy Statement became effective in June 2011. While a policy statement and not a regulation, it sets forth the agency's *expectations* for individuals and organizations to establish and maintain a positive safety culture. You can access the policy statement and supporting material that may benefit your organization on NRC's safety culture Web site at http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html. We strongly encourage you to review this material and adapt it to your particular needs in order to develop and maintain a positive safety culture as you engage in NRC-regulated activities.

In order to continue prompt review of your application, we request that you submit your response to this letter within 30 calendar days from the date of this letter.

Sincerely,

Original signed by Elizabeth Ullrich

Betsy Ullrich
Senior Health Physicist
Commercial and R&D Branch
Division of Nuclear Materials Safety

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