

~~Official Use Only - Security-Related Information~~

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

JUN 08 2011



James A. Kammerer
Radiation Safety Officer
State of Missouri
Emergency Management Agency
P.O. Box 116
Jefferson City, MO 65102

Dear Mr. Kammerer:

Enclosed is Amendment No. 16 renewing your NRC Material License No. 24-07974-03 in accordance with your request. Please note that the major changes made to your license are printed in **bold font**.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region III office at (630) 829-9887 so that we can provide appropriate corrections and answers.

This amendment renews your license for a ten year period and your license will not expire until June 30, 2021.

However, there were several inconsistencies in your renewal application rendering it partially incomplete. Therefore, in order to ensure your license is complete, at this time I temporarily continued authorization for all documents in License Condition No. 19, also called the "tie-down condition."

In order to complete your renewed license, to delete "old" documents from Condition No.19 and simplify compliance with and understanding of your license, please respond in writing to the following issues within 60 days of the date of this letter. If necessary, please contact me at (630) 829-9841 to arrange an alternate response date. My fax number is (630) 515-1078.

Please address your response to my attention as "additional information to control number 574090," ensure that it is signed by a senior management official and currently dated. These steps will greatly facilitate proper handling in our offices so that we may then continue our review.

The following discrepancies and issues were noted with respect to your application dated December 9, 2010, and letter dated December 7, 2010:

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The enclosed document contains sensitive security-related information.
When separated from this cover letter this letter is uncontrolled.

J. Kammerer

1. At this time I was unable to approve Jeffrey Rackers as an authorized user because the information in your application dated December 9, 2010, and your letter dated December 7, 2010, was insufficient to complete my review.

If you wish to pursue this matter please prepare a written response, that may either be included with the information requested to complete your renewal or submitted as a separate amendment. Your response should be currently dated and signed by a senior management official; addressed to me at the address above; and referenced as "additional information to control number 574090," to facilitate proper handling in our office. We will then continue our review.

Mr. Rackers was not approved as an authorized user because the training and experience information described in NUREG 1556, Vol. 18, section 8.7.2 and Appendix H was not submitted. Please provide all of this information, briefly and concisely, for Mr. Rackers. Please do not submit resumes, curricula vitae, college or school transcripts, any non-relevant information and no personally identifiable information.

2. In item 9 of your application you referred to "Standard Operating Procedure for CDV-794 and 790 calibrators, paragraph 3, and Annex A. In item 11 you referred to "Annex D." None of this referenced information was submitted. Please explain and, as applicable, please provide this information.
3. During my review of your renewal application dated November 20, 2010, and letter dated November 10, 2010, I noted that your renewal request was only partially prepared in accordance with NUREG 1556, Vol. 18, although the abstract in this document states, in part, "NUREG 1556, Vol. 18, "Consolidated Guidance about Materials Licenses: Program –Specific Guidance about Service Provider Licenses," is intended for use by applicants, licensees, and NRC staff and will also be available to Agreement States."

Full use of this document for all of your licensing correspondence will greatly reduce your regulatory burden, simplify your license and enhance safety by providing for more comprehensive, updated safety procedures and a complete renewal application.

Please see the enclosed guidance for additional information and advice regarding renewal of licenses.

4. At this time I added a new Condition No. 18 to your license, which is a standard condition normally found on your type of license.

NRC's Regulatory Issue Summary (RIS) 2005-31 provides criteria to identify security-related sensitive information and guidance for handling and marking of such documents. This ensures that potentially sensitive information is not made publicly available through ADAMS, the NRC's electronic document system.

J. Kammerer

Pursuant to NRC's RIS 2005-31 and in accordance with 10 CFR 2.390, the enclosed license document is exempt from public disclosure because its disclosure to unauthorized individuals could present a security vulnerability.

The RIS may be located on the NRC Web site at: <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/reg-issues/2005/ri200531.pdf> and the link for frequently asked questions regarding protection of security related sensitive information may be located at: <http://www.nrc.gov/reading-rm/sensitive-info/faq.html>.

A copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). The NRC's document system is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

You will be periodically inspected by NRC. Failure to conduct your program in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in enforcement action against you. This could include issuance of a notice of violation, or imposition of a civil penalty, or an order suspending, modifying or revoking your license as specified in the General Statement of Policy and Procedure for NRC Enforcement Actions.

Since serious consequences to employees and the public can result from failure to comply with NRC requirements, prompt and vigorous enforcement action will be taken when dealing with licensees who do not achieve the necessary meticulous attention to detail and the high standard of compliance which NRC expects of its licensees.

Sincerely,



Colleen Carol Casey
Materials Licensing Branch

License No. 24-07974-03
Docket No. 030-07247

Enclosures:

1. Amendment No. 16
2. Additional Guidance for
Renewing an NRC License
3. Appendix C from NUREG 1556,
Vol. 18, "marked-up"

J. Kammerer

Additional Guidance for Renewing an NRC License

Please note that using the NUREG 1556 series documents will help ensure that your licensing correspondence is prepared more completely and in a less burdensome manner.

In preparing future licensing correspondence please focus on providing the information requested in Appendix C to NUREG 1556, Volume 18. Follow the "Suggested Format.." provided in this Appendix and use the suggested responses and model procedure/appendix references whenever possible, appending descriptive information as appropriate. It is strongly advisable to read the corresponding text in the front of each NUREG to ensure a complete understanding of the commitments that you make.

Please do not submit resumes, curricula vitae, college transcripts, any personal, proprietary information, blueprint diagrams, or copies of blueprint diagram and any extraneous, prescriptive information and procedures, unless we specifically request it, which is unlikely.

If you must deviate from a model procedure or suggested response, it may be possible to simply indicate what the deviation is and still use the model procedure/ suggested response as a "basic" commitment. Descriptive information may be "recycled" from previous documents only so long as it is current, complete information equivalent to the model procedure (as appropriate) and does not contain extraneous material. This advice is particularly relevant to your high dose rate (HDR) remote afterloading brachytherapy program and the significant quantity of procedures, diagrams, commitments, etc. that we need to continue this authorization.

It is in your best interests to only provide those commitments, statements, representations and procedures, in a clear and explicit manner, that we require to issue your license. These documents will form the basis for the license in the last condition of the license, called the "tie-down" condition.

You will realize the benefit of a reduced regulatory burden while enhancing safety and maintaining compliance and efficiency if you establish your license in this manner.

In fact, the easiest way to prepare a renewal, for example, is to take a copy of NUREG 1556, Vol. 18, Appendix C, to your copy machine and copy it out directly. Read the text in the front of the NUREG that corresponds to each section and simply fill in the checkmarks and blanks on the copied checklist, thereby making your license commitments.

J. Kammerer

Please do not re-type the checklist as errors and omissions may be introduced.. As you need to append certain information or provide an alternative procedure, please be sure to incorporate the information in the NUREG, at a minimum, to ensure completeness.

Please see the attached marked-up copy of Appendix C to NUREG 1556, Vol. 18. A hard copy of this document should have been sent to you already. It is also available on our website at:

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/v9/r2/>

I indicated, via manual markings on the copy, where there are items that appear to be missing or incomplete.

If you wish, you may contact me at the telephone number above to discuss further on how best to go about generating the resubmittal of your renewal application. We would be happy to assist you as we are able.

Suggested Format for Providing Information Requested in Items 5 through 11 of NRC Form 313

Appendix C is designed to be used for all types of applicants requesting a service license. Because of the varied types of service applications it is necessary to make this appendix sufficiently broad in scope to handle most applications. Services such as commercial nuclear laundries and waste management applicants may need to provide additional information once the necessary pre-licensing visit(s) are completed. Maintaining close coordination during the early licensing phase with the NRC licensing staff can be beneficial to both the NRC staff and applicant.

Using this appendix successfully requires the applicant to do an initial review of the NUREG and preplan its answers. We suggest that applicants read the entire appendix from beginning to end. The next step is to select the individual elements that apply to the individual types of service(s) requested. Highlight or circle Item Nos, or in some other way identify the areas that require specific information. Provide the information on the specific elements that you identified as requiring input for obtaining authorization for the requested services.

After selecting the applicable items that need to be addressed in Appendix C, refer to the corresponding sections in the NUREG. It is only necessary for applicants to provide the level of detail required for the individual types of service(s) requested in the application. Note that providing information for very limited licenses, e.g., leak test service provider, requires less information than would be required for a commercial nuclear laundry or a waste management license. Applicants for service licenses requiring authorization for types and quantities of material specific for broad scope licenses should refer to NUREG-1556, Vol. 11, "Consolidated Guidance About Material Licenses: Program-Specific Guidance About Licenses of Broad Scope," and NUREG-1556, Vol. 7, "Consolidated Guidance About Material Licenses: Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope."

Item No.	Title and Criteria	Use Table(s) Below	Description Attached
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APPENDIX C

5	RADIOACTIVE MATERIAL		
	<p>Sealed Sources and Devices</p> <ul style="list-style-type: none"> Identify each radionuclide that will be used in each sealed source/device. Identify the manufacturer or distributor and model number of each sealed source/device. Confirm that each sealed source/device combination is listed and approved in the SSD registry for the purpose intended. Confirm that the activity per source/maximum activity per device specified in the SSD registration certificate will not be exceeded. 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

*OK AS
(S)*

Sealed Sources

Radioisotope	Manufacturer/ Model No.	Quantity	Yes	No
		Not to exceed the maximum activity per source/device as specified in the Sealed Source and Device Registration Sheet	<input type="checkbox"/>	<input type="checkbox"/>
		Not to exceed the maximum activity per source/device as specified in the Sealed Source and Device Registration Sheet	<input type="checkbox"/>	<input type="checkbox"/>
		Not to exceed the maximum activity per source/device as specified in the Sealed Source and Device Registration Sheet	<input type="checkbox"/>	<input type="checkbox"/>

(This has changed)

*POSSESSION
LIMITS
NEEDED NOW
WE HAVE FOR
YOUR LICENSE*

Source Material

- Depleted Uranium _____ Kilograms
- Uranium-238 _____ Kilograms
- Thorium-232 _____ Kilograms
- Other: Specify _____ Kilograms

NK

Special Nuclear Material

Radioisotope	Manufacturer/ Model No.	Quantity	Yes	No

APPENDIX C

<input type="checkbox"/> Uranium-234 <input type="checkbox"/> Uranium-235 <input type="checkbox"/> Plutonium-238 <input type="checkbox"/> Plutonium-239 <input type="checkbox"/> Other: Specify		Not to exceed the maximum activity per source/device as specified in the Sealed Source and Device Registration Sheet <i>NA</i>	<input type="checkbox"/>	<input type="checkbox"/>
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Unsealed or Uncontained Materials

Identify each individual isotope requested:

Radioisotope	Chemical or Physical Form				Total Activity Requested
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	

OR

Identify your request for Type B or Type C quantities of material by filling out the table below:

Radioisotope	Yes	No
• Any radioisotope identified in 10 CFR 33.100, Schedule A, Column I — (Type B License of Broad Scope)	<input type="checkbox"/>	<input type="checkbox"/>
OR		
• Any radioisotope identified in 10 CFR 33.100, Schedule A, Column II — (Type C License of Broad Scope)	<input type="checkbox"/>	<input type="checkbox"/>

AND IF APPLICABLE

Identify *individual isotopes* identified in 10 CFR 33.100 Schedule A, Column I or II, that requested quantities exceeding amounts authorized in Column I or II.

Radioisotope	Chemical or Physical Form				Total Activity Requested
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	

AND

APPENDIX C

Identify any uncontained source or special nuclear materials that should be included in the license:

Source Material	
<input type="checkbox"/> Depleted Uranium	_____ Kilograms
<input type="checkbox"/> Uranium-238	_____ Grams
<input type="checkbox"/> Thorium-232	_____ Grams
<input type="checkbox"/> Other:	_____ Grams

NA

Special Nuclear Material Less than Critical Mass Quantities	
<input type="checkbox"/> Uranium-234	_____ Grams
<input type="checkbox"/> Uranium-235	_____ Grams
<input type="checkbox"/> Plutonium-238	_____ Grams
<input type="checkbox"/> Plutonium-239	_____ Grams

NA

For those individuals who will provide commercial services on sealed sources/devices and will be required to *take possession of materials incident to providing services*:

Sealed Sources/Devices Possessed Incident to Providing Services				
Radioisotope	Manufacturer/ Model No.	Quantity	Yes	No
	NA	Not to exceed the maximum activity per source/device as specified in the Sealed Source and Device Registration Sheet	<input type="checkbox"/>	<input type="checkbox"/>
		Not to exceed the maximum activity per source/device as specified in the Sealed Source and Device Registration Sheet	<input type="checkbox"/>	<input type="checkbox"/>

Source Material	
<input type="checkbox"/> Uranium-238	_____ Kilograms
<input type="checkbox"/> Thorium-232	_____ Grams
<input type="checkbox"/> Other:	_____ Grams
<input type="checkbox"/> Depleted Uranium	_____ Kilograms

NA

Special Nuclear Material Less than Critical Mass Quantities

- Uranium-234 _____ Grams
- Uranium-235 _____ Grams
- Plutonium-238 _____ Grams
- Plutonium-239 _____ Grams

NA

For those individuals who will provide commercial services involving unsealed or uncontained material and will be required to take possession of these materials incident to providing services:

Unsealed or Uncontained Materials

Identify each individual isotope requested:

Radioisotope	Chemical or Physical Form				Total Activity Requested
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	

NA

OR

Identify your request for Type B or Type C quantities of materials by filling out the table below:

Radioisotope	Yes	No
• Any radioisotope identified in 10 CFR 33.100, Schedule A, Column I — (Type B License of Broad Scope)	<input type="checkbox"/>	<input type="checkbox"/>
OR		
• Any radioisotope identified in 10 CFR 33.100, Schedule A, Column II — (Type C License of Broad Scope)	<input type="checkbox"/>	<input type="checkbox"/>

NA

APPENDIX C

AND IF APPLICABLE

Identify *individual isotopes* identified in 10 CFR 33.100 Schedule A, Column I or II, that requested quantities exceeding amounts authorized in Column I or II.

Radioisotope	Chemical or Physical Form				Total Activity Requested
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	
	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other: Specify	

AND

NA

Identify any uncontained source or special nuclear materials that should be included in the license:

Source Material	
<input type="checkbox"/> Depleted Uranium	_____ Kilograms
<input type="checkbox"/> Uranium-238	_____ Grams
<input type="checkbox"/> Thorium-232	_____ Grams
<input type="checkbox"/> Other:	_____ Grams
Special Nuclear Material	
<input type="checkbox"/> Uranium-234	_____ Grams
<input type="checkbox"/> Uranium-235	_____ Grams
<input type="checkbox"/> Plutonium-238	_____ Grams
<input type="checkbox"/> Plutonium-239	_____ Grams

Item No.	Title and Criteria	Yes	No	N/A	Description Attached
5	<p>RADIOACTIVE MATERIAL</p> <p>Financial Assurance and Recordkeeping For Decommissioning</p> <ul style="list-style-type: none"> Pursuant to 10 CFR 30.35(g), we shall maintain drawings and records important to decommissioning and transfer these records to a new licensee before licensed activities are transferred, or assign the records to the appropriate NRC Regional Office before the license is terminated. <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> If financial assurance is required, submit evidence. 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*Sealed sources -
high DFAL threshold
not required.*

APPENDIX C

Item No.	Title and Criteria	Yes	No	N/A	Description Attached
7	<p>INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE</p> <p>Radiation Safety Officer</p> <ul style="list-style-type: none"> • The name of the proposed RSO: <p style="text-align: center;">AND EITHER</p> <ul style="list-style-type: none"> • The specific training and experience of the RSO; <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • Alternative information demonstrating that the proposed RSO is qualified by training and experience, e.g., listed by name as an authorized user or the RSO on an NRC or Agreement State license that requires a radiation safety program of comparable size and scope. 				<p style="text-align: right;"><input type="checkbox"/></p> <p style="text-align: right;"><input type="checkbox"/></p>

If incumbent, do not resubmit training and experience

Item No.	Title and Criteria	Yes	No	N/A	Description Attached
9	<p>FACILITIES AND EQUIPMENT (Cont'd.)</p> <p>Permanent Facilities Specifically Identified on the License Requesting the Use of Unsealed or Uncontained Material</p> <ul style="list-style-type: none"> • Leak Test and Environmental Sample Analysis Providers: No response required for facilities. (Equipment is discussed in Item 10, Radiation Safety Program.) • Other services that involve handling of unsealed radioactive material at permanent facilities or field stations identified on the license: <ul style="list-style-type: none"> – Describe the permanent facilities and equipment to be made available at each location where unsealed radioactive material will be used or handled. – 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. – Submit a diagram, sketch, or drawing, when applicable, that identifies areas where radioactive materials may become airborne. The diagram should contain descriptions of the ventilation systems, with pertinent airflow rates, filtration equipment, sample collection points, and monitoring systems. – Submit a diagram of radioactive waste handling equipment that includes incinerators, compactors, solidification equipment, hold-up tanks, sample collection points, etc. 	No Response is Necessary for this Section			
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>

COMPLETE?
IF APPLICABLE

Item No.	Title and Criteria	Yes	No	N/A	Description Attached
10	<p>RADIATION SAFETY PROGRAM</p> <p>The applicant is required to establish and submit its radiation protection program. Each item listed below should be addressed in the corresponding sections of this guide.</p> <ul style="list-style-type: none"> • Development and implementation of an ALARA program. • Description of equipment and facilities adequate to protect personnel, the public and the environment. • Confirmation that licensed activities are conducted only by individuals qualified by training and experience. • Development and maintenance of written operating and emergency procedures. • Implementation of an audit program to ensure that, at least annually, the radiation safety program is reviewed. • Description of organization structure and individuals responsible for ensuring day-to-day oversight of the radiation safety program. • Establishment and management of a radiation safety and decommissioning records system. • Methods or procedures for preventing the release of contaminated material and equipment. • Methods or procedures for preventing personnel contamination. Radiation safety procedures and the authorized users responsibilities unique to each type of service operation requested in the application. • Radiation safety procedures. • Equipment, techniques, and corresponding radiation safety procedures associated with providing services involving either sealed sources or unsealed materials. 				
	<p>Audit Program</p>				
					<p>Need Not Be Submitted With Application</p>

NEEDED
(DO NOT
SUBMIT
A
RADIATION
SAFETY
MANUAL
PLEASE)

Audit Program

Need Not Be Submitted With Application

Item No.	Title and Criteria	Yes	No	N/A	Description Attached
10	<p>RADIATION SAFETY PROGRAM (Cont'd.)</p> <p>Radiation Monitoring Instruments (Cont'd.)</p> <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • A description of alternative equipment and/or procedures for ensuring that appropriate radiation monitoring equipment will be used during licensed activities and that proper calibration and calibration frequency of survey equipment will be performed. The statement, "We reserve the right to upgrade our survey instruments as necessary," should be added to the response. <p>Material Receipt and Accountability</p> <ul style="list-style-type: none"> • "Ordering licensed material and package receipt and opening will follow the model procedures in Appendix K of NUREG-1556, Vol. 18, 'Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses,' dated November 2000." <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • Submit a description of procedure(s) for ordering licensed material and package receipt and opening. <p style="text-align: center;">AND</p> <ul style="list-style-type: none"> • For unsealed licensed material, submit a description of procedure(s) for ensuring material accountability. 				<p style="text-align: right;"><input type="checkbox"/></p>

NEEDED

NEEDED

Item No.	Title and Criteria	Yes	No	N/A	Description Attached
10	RADIATION SAFETY PROGRAM (Cont'd.)				
	Occupational Dosimetry (Cont'd.)				
	OR				
	<ul style="list-style-type: none"> • Contract with an outside group for bioassay services. Provide a commitment that each vendor is licensed or otherwise authorized by NRC or Agreement State to provide required bioassay services. <i>N/A</i> 				<input type="checkbox"/>
	Public Dose	Need Not Be Submitted With Application			
	The applicant is not required to, and should not, submit a response to the public dose section during the licensing phase. This matter will be addressed during an inspection.				
	Operating and Emergency Procedures				
	<ul style="list-style-type: none"> • Procedure for obtaining an agreement with customers outlining the responsibilities of both the customer and service provider, when performing service operations at a customer's facility 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Instructions for handling and using licensed materials. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Instructions for maintaining security during storage and transportation. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Instructions to keep licensed material under control and immediate surveillance during use. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Steps to take to keep radiation exposures ALARA. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Steps to maintain accountability during use. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Steps to control access to work sites. • Steps to take and whom to contact when an emergency occurs. 	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
	<ul style="list-style-type: none"> • Instructions for using remote handling tools when handling sealed sources, except low-activity calibration sources. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Methods and occasions for conducting radiation surveys, including surveys for detecting contamination. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NEEDED

APPENDIX C

Item No.	Title and Criteria	Yes	No	N/A	Description Attached
10	RADIATION SAFETY PROGRAM (Cont'd.)				
	Operating and Emergency Procedures (Cont'd.)				
	<ul style="list-style-type: none"> • Procedures to minimize personnel exposure during routine use and in the event of an incident, including exposures from inhalation and ingestion of licensed unsealed materials. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Methods and occasions for locking and securing stored licensed materials. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Procedures for the implementation and adherence to good health physics practices while performing service operations: 				
	<ul style="list-style-type: none"> – Minimization of distance to areas, to the extent practicable, where licensed materials are used and stored 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> – Maximization of survey frequency, within reason, to enhance detection of contamination 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> – Segregation of radioactive material in waste storage areas 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> – Segregation of sealed sources and tracer materials to prevent cross-contamination 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> – Separation of radioactive material from explosives 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> – Separation of potentially contaminated areas from clean areas by barriers or other controls. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Personnel monitoring, including bioassays, and the use of personnel monitoring equipment. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Transportation of licensed materials to temporary job sites, packaging of licensed materials for transport in vehicles, placarding of vehicles when needed, and physically securing licensed materials in transport vehicles during transportation to prevent accidental loss, tampering, or unauthorized removal. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Procedures for picking up, receiving, and opening packages containing licensed materials, in accordance with 10 CFR 20.1906. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • Instructions for maintaining records in accordance with the regulations and the license conditions. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NEEDED AS APPLICABLE

APPENDIX C

Item No.	Title and Criteria	Yes	No	N/A	Description Attached
<p>10</p> <p style="position: absolute; left: -100px; top: 50px; transform: rotate(-90deg); font-weight: bold;">NEEDED</p>	<p>RADIATION SAFETY PROGRAM (Cont'd.)</p> <p>Surveys</p> <ul style="list-style-type: none"> • “We will survey our facility and maintain contamination levels in accordance with the survey frequencies and contamination levels published in NUREG-1556, Vol. 18, ‘Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses,’ dated November 2000.” <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • Submit description of alternative method for demonstrating how to evaluate a radiological hazard. <p>Leak Tests</p> <ul style="list-style-type: none"> • “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.” <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • “Leak testing will follow the model procedures in Appendix O of NUREG-1556, Vol. 18, ‘Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses,’ dated November 2000.” 	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>

Item No.	Title and Criteria	Yes	No	N/A	Description Attached
10	RADIATION SAFETY PROGRAM (Cont'd.) Leak Tests (Cont'd.) <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • “Leak testing procedures and analysis will be done by the applicant.” Provide the information in supporting a request to perform leak testing. Appendix O of NUREG-1556, Vol. 18, “Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses,” dated November 2000, may serve as guidance. <p style="text-align: center;"><i>NA</i> OR</p> <ul style="list-style-type: none"> • “We will provide commercial leak test kits as described in the model leak test kit description in Section 8.9.8 of NUREG-1556, Vol. 18, ‘Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses,’ dated November 2000.” <p style="text-align: center;">AND</p> <ul style="list-style-type: none"> • “We will provide leak test kits as described in the model leak test kit description in Section 8.9.8 of NUREG-1556, Vol. 18.” • Provided is a sample of the leak test kits that will be distributed commercially for each type of sealed source/device combination we plan to provide. 				

APPENDIX C

Item No.	Title and Criteria	Yes	No	N/A	Description Attached
10	<p>RADIATION SAFETY PROGRAM (Cont'd.)</p> <p>Maintenance</p> <ul style="list-style-type: none"> • “We will implement and maintain procedures for conducting routine maintenance of our device according to each manufacturer’s (or distributor’s) written recommendations and instructions.” <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • Alternative procedures are provided for NRC’s review. • “We will have the device manufacturer (or distributor) or other person authorized by NRC or an Agreement State to perform non-routine maintenance on our devices.” <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • Information requested in Appendix P of NUREG-1556, Vol. 18, “Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses,” dated November 2000, is provided to support requests to conduct non-routine maintenance procedures. <p>Minimization of Contamination</p> <ul style="list-style-type: none"> • NRC will consider that the criteria for minimization of contamination has been met if the applicant’s responses satisfy the criteria in the following sections: “Radioactive Material – Unsealed and/or Sealed Sources,” “Facilities and Equipment,” “Radiation Safety Program – Safe Use of Radioisotopes and Emergency Procedures,” “Radiation Safety Program – Surveys,” and “Radiation Safety Program – Waste Management.” 	<p style="text-align: center;">OK.</p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
		<p>No Response is Necessary for this Section</p>			

