



CONVERSATION RECORD

07/17/2015

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU James Brown, Ph.D., Radiation Safety Officer (RSO) and Associate Professor		DATE OF CONTACT 06/26/2015	TYPE OF CONVERSATION <input type="checkbox"/> E-MAIL <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> INCOMING <input checked="" type="checkbox"/> OUTGOING
E-MAIL ADDRESS brownj@wabash.edu		TELEPHONE NUMBER (765) 361-6282	

ORGANIZATION 301 W. Wabash Ave. Crawfordsville, IN 47933	DOCKET NUMBER(S) 030-14430
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LICENSE NUMBER(S) 13-07419-02	CONTROL NUMBER(S) 586232
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**SUBJECT**  
Our review of your March 4, 2015, license renewal application. Additional information is requested by August 14, 2015. Please email your response as pdf attachment to sara.forster@nrc.gov, or send via FAX to (630) 515-1078.

**SUMMARY AND ACTION REQUIRED:**  
Please provide information noted below. Respond via a signed & dated cover letter, using typed 8.5" x 11" sheets. Refer to NUREG 1556, Vol. 7, "Program-Specific Guidance About Academic, Research and Development, and other Licenses of Limited Scope," at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/v7/>, when responding. Please call or email me with any questions.

**ADDITIONAL INFORMATION NEEDED:**

- RADIOACTIVE MATERIAL:** The application, p. 1, indicated that certain material that is exempt or subject to a General License may be possessed without being subject to the specific NRC license identified above. Please confirm that any such material not subject to this license shall have been distributed and received from a person or entity authorized to distribute such exempt quantity or generally licensed material.
- PURPOSE FOR WHICH LICENSED MATERIAL WILL BE USED:** As discussed, please confirm that: (a) the 1.5 microcurie americium-241 source will be used exclusively as a calibration and reference source; (b) no field studies will be conducted under the above referenced license; and (c) requested research and development use authorization includes (or, excludes) animal studies.

- RADIATION SAFETY COMMITTEE (RSC):** As we discussed, additional information is needed to continue to explicitly assign RSC oversight responsibilities and authority for the above referenced license. Please provide additional information to either retain the RSC (Item 3.1) or to limit the scope of the license to specific Authorized Users (AUs) and laboratories (Item 3.2) as discussed below.
  - Please respond to the following items, as discussed:
    - Are audits performed by the RSC limited to reviews of the annual RSO audits? Please describe any steps the RSC may take to ensure compliance (e.g., stop work; issue citation; report to management; require corrective action, etc.).

**NAME OF PERSON DOCUMENTING CONVERSATION**  
Sara A. Forster, Materials Licensing Branch, Region III Office, 2443 Warrenville Road, Suite 210, Lisle, IL 60532; (630) 829-9892

**SIGNATURE**  
*Sara A. Forster* 07/17/2015

CONVERSATION RECORD (continued)

J. Brown

C/N 586232

SUMMARY AND ACTION REQUIRED - ADDITIONAL INFORMATION NEEDED (Continued from page 1):  
RADIATION SAFETY COMMITTEE (Continued from page 1):

3.1. Information needed to retain RSC (Continued from page 1)

- (b) How does the RSC review, evaluate and approve radioactive materials work areas? For example, describe the process used to review new areas of use, describe lab diagrams required to complete a review, outline criteria used to approve an area, and indicate how radioactive quantity and volatility affect the evaluation.
- (c) Please confirm that the RSC's review and approval of program and procedural changes, as outlined on p. 2 of the application, refers to the review and approval of specific laboratory procedures including experimental procedures. Indicate how such changes may be proposed, reviewed, and approved, and confirm that the RSC will assure compliance with all regulatory and license requirements, including any procedures submitted to the NRC in support of license amendment and renewal requests.
- (d) For Authorized Users (AUs), please (i) describe the type of authorized use that may be permitted in the case where only 10 hours of supervised experience is required for approval by the RSC; (ii) outline how new AUs are evaluated by the RSC and/or RSO; and (iii) confirm that the RSC will document its review of any new AU to confirm the adequacy of that AU's training and experience consistent with the discussion section under Section 8.7.2. Authorized User, in NUREG 1556, Vol. 7, pp. 8-16 to 8-17.

3.2. Information needed to limit scope of authorized use to explicit AUs and areas of use (Continued from page 1)

- (a) Provide a facility diagram for each radioactive materials work/storage area to be authorized under the license. If any areas of use previously approved under the license have been removed, please provide a final closeout survey and final disposition information for materials used or stored in those areas.
- (b) Please provide the name, qualifications, and approved radioactive use(s) for each AU to be listed on the limited scope license. Qualifications should include the individuals' names; highest level degree(s) including institution and major area of study; radiation safety training dates and locations; and hands-on use of radioactive materials including radionuclides, quantities, and brief purpose of use descriptions.

- 4. RADIATION SAFETY OFFICER (RSO): Please expand the responsibility to perform annual audits, as noted on p. 3 of the application, to clarify items reviewed (e.g. area survey records, monitoring, swipe test records, inventory and use records, calibrations, and dosimetry). Please also note the frequency at which the RSO will monitor and/or survey areas where licensed material is used and/or stored.
- 5. TRAINING: As discussed, please resubmit topics, training methods/formats, instructor qualifications (e.g., RSO or AU, etc.), and assessment methods - as outlined and discussed in NUREG 1556, Vol. 7, pp. 8-18 to 8-19 and in Appendix J, pp. J-1 to J-5. If training details vary for each group of workers (e.g. receiving, housekeeping, etc.), please specifically identify topics to be covered for that group.
- 6. FACILITIES AND EQUIPMENT: As discussed, please resubmit facility description to include the following items:
  - 6.1. Please provide an overall map highlighting all buildings (e.g., Hays Hall and Goodrich Hall) at the licensee's 301 W. Wabash Ave. campus where radioactive materials may be used or stored under the license. Please also confirm that no buildings other than the highlighted buildings have historically been locations where radioactive materials have been used or stored.
  - 6.2. Please provide diagrams and room numbers for each area where licensed material may be used or stored under the licensee's license. Each diagram should show dimensions or be drawn to scale, indicate what is located above, below, and adjacent to the area, and include key elements such as secure access doors, sinks, fume hoods, refrigerators, freezers, other radioactive materials storage, work areas, or waste holding areas.

CONVERSATION RECORD (continued)

J. Brown

C/N 586232

SUMMARY AND ACTION REQUIRED - ADDITIONAL INFORMATION NEEDED (Continued from page 1):  
FACILITIES (Continued from page 2):

6.3. For an authorization to use radioactive materials in animal studies, please provide a facility diagram for any radioactive materials use area where animals may be housed or otherwise used. Refer to NUREG 1556, Vol. 7, Appendix H, pp. H-1 to H-5 for additional considerations for laboratory use of animals.

6.4. The most recent amendment (No. 14) to the above referenced license incorporates statements made in the December 22, 2004, application, as they relate to instruments. As discussed, please describe instruments to be used under the licensee's license, as included in the December 22, 2004 application, p. 5, Item 9.0.

7. RADIATION SAFETY PROGRAM and WASTE PROCEDURE: As for the instruments section above, the most recent amendment (No. 14) to the above referenced license incorporates statements made in the December 22, 2004 application, as they relate to the radiation safety program and waste procedures. As discussed, additional information is needed confirm that the licensee's March 4, 2015 application adequately describes the licensee's radiation safety program and/or waste procedure. Accordingly, please resubmit the licensee's responses to Item 10.0 "Radiation Safety Program" and to Item 11.0 "Waste Management" as outlined on pages 5 through 8 of the licensee's March 4, 2015, application. Include the following in your response:

7.1. Please confirm statements as outlined in NUREG 1556, Vol. 7, Appendix C, pages C-5 to C-10. For any alternative response, please describe the licensee's procedures for survey instrument use, survey instrument calibration, material receipt and accountability, occupational dose monitoring, safe use of radioactive materials and emergencies, surveys, leak testing, and waste management.

7.2. Please note any resubmitted responses that are meant to replace procedures contained in the March 4, 2015, application.

NRC believes that to demonstrate adequate training and experience the AU should have (1) a college degree at the bachelor level, or equivalent training and experience in physical, chemical, or biological sciences or in engineering; and (2) training and experience commensurate with the scope of proposed activities. Training should include the following subjects:

- Radiation Protection Principles
- Characteristics of Ionizing Radiation
- Units of Radiation Dose and Quantities
- Radiation Detection Instrumentation
- Biological Hazards of Exposure to Radiation (appropriate to the types and forms of byproduct material to be used)
- Hands-on Use of Radioactive Materials.

The amount of training and experience needed will depend upon the type, form, quantity and proposed use of the licensed material requested, but it should cover the subjects stated.

An AU is considered to be supervising the use of radioactive materials when he/she directs personnel in operations involving the licensed material. Although the AU may delegate specific tasks to supervised users (e.g., conducting surveys, keeping records), he/she is responsible for the safe use of radioactive material to assure that areas are not contaminated.

Applicants must name at least one individual who is qualified to use the requested licensed materials. In general, AUs must demonstrate training and experience with the type and quantity of material that they propose to use. For example, someone with training and experience only with sealed radioactive sources may not be qualified to use or supervise the use of unsealed licensed material. In addition, someone with experience using only trace quantities may not understand the risks of working with much larger (e.g., 10 or 100 times larger) quantities of the same substance. Applicants should pay particular attention to the type of radiation involved. For example, someone experienced with gamma emitters may not have appropriate experience for high energy beta emitters.

**Response from Applicant:** Provide the following:

- Name of each proposed AU with the types and quantities of licensed material to be used
- Information demonstrating that each proposed AU is qualified by training and experience to use the requested licensed materials.

## **Radiation Safety Training Topics**

This Appendix is intended only as a guide for developing a training program. Individuals working with radioisotopes may not require training on every topic provided. For example, housekeeping staff may need to know only what symbols to look for, which waste cans to empty, or which areas to enter or avoid. Conversely, laboratory technicians may require detailed information on particular topics. As a result, instruction for some individuals may be provided by providing a simple hand-out, whereas others may require extensive training, including a written exam to assess retention of the topics presented.

### **Frequency of Training**

- A. Before assuming duties with, or in the vicinity of, radioactive materials
- B. Whenever there is a significant change in duties, regulations, or the terms of the license
- C. Annually (refresher training).

### **General Information**

- A. Radiation safety
  - 1. radiation vs. contamination
  - 2. internal vs. external exposure
  - 3. biological effects of radiation
  - 4. ALARA concept
  - 5. use of time, distance, and shielding to minimize exposure.
- B. Regulatory requirements
  - 1. RSO
  - 2. material control and accountability
  - 3. personnel dosimetry
  - 4. radiation safety program audits
  - 5. transfer and disposal
  - 6. record keeping
  - 7. surveys
  - 8. postings

## APPENDIX J

9. labeling of containers
10. handling and reporting of incidents or events
11. licensing and inspection by NRC
12. need for complete and accurate information
13. employee protection
14. deliberate misconduct.

### **Licensee-Specific Program Elements**

- A. Authorized users and supervised users.
- B. Ordering and receiving radioisotopes.
- C. Applicable regulations and license conditions.
- D. Areas where radioactive material is used or stored.
- E. Potential hazards associated with radioactive material in each area where the individuals will work.
- F. Appropriate radiation safety procedures.
- G. Licensee's in-house work rules. (For instructions on laboratory safety and uses of radioisotopes, see Section IV.)
- H. Each individual's obligation to report unsafe conditions to the RSO.
- I. Appropriate response to spills, emergencies or other unsafe conditions.
- J. Worker's right to be informed of occupational radiation exposure and bioassay results, if applicable.
- K. Locations where the licensee has posted or made available: notices, copies of pertinent regulations, and copies of pertinent licenses and license conditions (including applications and applicable correspondence), as required by 10 CFR Part 19.
- L. Emergency procedures:
  1. RSO name and telephone number
  2. immediate steps to prevent or control spread of contamination
  3. clean-up instructions, decontamination.

M. Survey program:

1. survey instrument accessibility
2. who is responsible
3. types, contamination and area
4. frequency
5. levels of contamination
6. personnel, hands, shoes
7. records.

N. Waste

1. liquid
2. solids
3. sanitary sewer
4. burial (transfer to low level waste repository)
5. storage
6. decay-in-storage
7. waste storage surveys
8. incineration
9. records.

O. Dosimetry

1. whole body
2. extremities
3. lost or replacement badges and dose assessment
4. bioassay procedures
5. records.

P. Instrumentation

1. survey meters-use, calibration frequency, use of check sources
2. analytical instruments-gas chromatographs, liquid scintillation counters.

APPENDIX J

Q. Procedures for receiving packages containing radioactive materials.

1. normal
2. off-duty
3. notification of user and RSO
4. security
5. exposure levels
6. possession limit
7. receipt of damaged packages.

R. Procedures for opening and examining packages

1. leakage and contamination
2. monitoring packages
3. monitoring packing materials
4. gloves
5. transferring material to users.

S. Animal experiments

1. description of facilities
2. safety instructions, including handling of animals, waste, carcasses, and cleaning and decontamination of cages
3. security.

T. Sealed sources

1. leak test requirements
2. inventory requirements
3. exempt quantities
4. records.

U. Other topics, as applicable

V. Question and answer period.



**For Laboratory Safety and Use of Radioisotopes**

- A. Control procedures for obtaining permission to use radioactive materials at the facility; give limitations on quantity to be handled per user, allowed per experiment, etc.
- B. Protective clothing and what laboratory apparel to wear and what equipment to use.
- C. Limitations and conditions relative to handling unsealed licensed material and what laboratory equipment to use when working with such material. As an example, discuss which licensed materials and what procedures should be confined to radiochemical fume hoods or gloveboxes. Explain what shielding or remote handling equipment is to be used when beta and/or gamma emitting licensed materials are handled.
- D. Routine survey and monitoring procedures to be followed for contamination control. Include where and how contaminated articles and glassware are to be handled and stored.
- E. Emergency procedures concerning spills, fires, release of material, and/or accidental contamination of personnel.
- F. Decontamination procedures to use and whom to contact in case of an emergency.
- G. Instructions concerning transfer of licensed materials between rooms, halls, or corridors, if applicable.
- H. Requirements for storage, labeling of containers, and identification of areas where licensed materials are used.
- I. Personnel monitoring devices to use, where to obtain them, and exchange procedures and exposure results.
- J. Waste disposal procedures to follow, limitations for disposal of liquid or solid wastes, and procedures to use for waste storage. If program involves experiments with animals, procedures for cleaning animal quarters and handling animal excreta and carcasses for disposal.
- K. Records to be maintained on use and disposal of licensed materials.
- L. Prohibition of pipetting by mouth, eating, smoking, and drinking in areas where licensed materials are used.

## Facilities and Equipment Considerations

Below is a list of topics that should be considered when developing a description of the facilities and equipment that an ARDL licensee will use or otherwise have available. Not every ARDL applicant will need to address each topic in its application.

- Restricted areas are defined as areas to which access is limited by the licensee to protect individuals against undue risks from exposure to radiation and radioactive materials. The application should contain detailed descriptions and diagrams of the facilities, including information about the shielding properties of the construction materials used. Scaled drawings and sketches should be submitted showing the relationship between restricted areas and unrestricted areas and the location of all pertinent safety-related equipment.
- Bench top or open work areas may be used for sealed sources, for small quantities of solid materials in a form not likely to become airborne or dispersed, and for small quantities of liquids of such low volatility as not to cause airborne contamination or toxicity problems. Trays and/or absorbent surface covers to catch and retain spilled liquids should be used on these open work surfaces and inside closed systems discussed below. Surfaces should be smooth and non-porous, to facilitate decontamination.
- Radioactive materials that are handled or used in unsealed forms should be confined to control the release of material and to prevent the spread of contamination. Gaseous, volatile, and fine particulate solid materials should be handled in closed or isolated systems such as fume hoods or glove boxes with controlled, and possibly filtered, exhaust systems.

Chemical-type fume hoods provide a working area with controlled inward airflow from the room to the hood exhaust system. Hoods are used for gases, for unsealed volatile licensed materials, and for processes such as evaporation that may release gases and vapors. Fume hoods provide emergency ventilation and exhaust for unplanned releases, such as accidental spills and ruptures, as well as routine exhaust of effluents. Filters may be required in the exhaust stream unless monitoring and/or calculations demonstrate that any planned or likely effluent will be in accordance with the limits found in 10 CFR 20, Appendix B.

Glove boxes are sealed boxes with transparent viewing windows, sealable ports or doors for transferring materials and equipment, and gloves sealed to the box through which licensed materials are handled. Glove boxes are used for the containment during storage and use of liquids and solids that can become airborne particulates or aerosols. Glove boxes can be closed or exhausted, with filtration systems if appropriate, to prevent contamination.

- Sink faucets should be designed, where possible, for operation by foot, knee, or elbow rather than by hand.
- Plumbing and ductwork should be designed to avoid radioactive contamination build-up. This build-up of contamination can create external radiation exposure hazards and problems for decommissioning.

## APPENDIX K

- Shielding consisting of lead or other high-density material in the form of bricks, panels, L-shields, storage containers, or other shapes may be used on bench tops, in fume hoods or in glove boxes to reduce radiation exposure from gamma-emitting radioactive materials. Similarly, shielding of low atomic number material, such as high-density plastic, may be used to reduce the exposure from high-energy beta-emitting materials. Shielded shipping containers are frequently used for continued storage after receipt of materials.
- A particular sink should be designated for disposal of liquid radioactive waste to the sanitary sewerage system. In some cases, depending on number of users and distance between areas of use, more than one sink may need to be designated.
- Labeled waste containers should be used. These containers may be shielded as necessary, placed near the waste-generating areas and away from areas frequently occupied by personnel. Additionally, these containers should be effectively enclosed to prevent airborne contamination from radioactive materials deposited.
- Remote handling tools, such as forceps or extension handles, should be used to provide distance in the handling of radioactive materials (ALARA). In addition, shielded handling devices, such as shielded syringes, can be used to protect workers from materials that cannot be handled remotely. Pipetting should be done using appropriate devices. Pipetting by mouth should be strictly forbidden.
- Where appropriate, ventilation systems should be designed such that, in the event of an accident, they can be shut down to prevent the spread of radioactivity.
- Designated areas should be provided for coats and personal belongings, to avoid contamination.
- Areas with background radiation levels should be designated for personnel dosimetry storage when not in use.
- Areas of use should be well-lighted to avoid spills and other accidents that could result in contamination build-up.
- Observation of activities conducted behind shielding with remote tools (or with extended arms and hands, within limits consistent with permissible occupational exposures) can be accomplished by mirrors, through shielded (e.g., leaded glass) windows, through transparent plastic beta shields, or by remote video monitoring.
- The combination of containment, shielding, and handling devices proposed for any use of radioactive materials should be appropriate to the type and quantity of materials to be used and to the type and duration of operations to be conducted.
- If respiratory protective equipment will be used to limit inhalation of airborne licensed material, follow the provisions of 10 CFR Part 20, Subpart H.

Item No.	Suggested Response	Yes	Description Attached
10.	<p data-bbox="261 352 870 384"><b>RADIATION SAFETY PROGRAM (Cont'd)</b></p> <p data-bbox="261 426 727 457"><b>Radiation Monitoring Instruments</b></p> <p data-bbox="261 499 1101 751">Describe the instrumentation that will be used to perform required surveys and state that: "We will use instruments that meet the radiation monitoring instrument specifications published in Appendix M to NUREG - 1556, Vol. 7, 'Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999. We reserve the right to upgrade our survey instruments as necessary."</p> <p data-bbox="662 793 711 825" style="text-align: center;"><b>OR</b></p> <p data-bbox="261 867 1101 1308">Describe the instrumentation that will be used to perform required surveys and state that: "We will use instruments that meet the radiation monitoring instrument specifications published in Appendix M to NUREG - 1556, Vol. 7, 'Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999. Additionally, we will implement the model survey meter calibration program published in Appendix M to NUREG - 1556, Vol. 7, 'Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999. We reserve the right to upgrade our survey instruments as necessary."</p> <p data-bbox="261 1360 743 1392"><b>Material Receipt and Accountability</b></p> <p data-bbox="261 1434 946 1507">Develop and maintain procedures for ensuring material accountability,</p> <p data-bbox="649 1549 714 1581" style="text-align: center;"><b>AND</b></p> <p data-bbox="261 1623 1092 1728">State that: "Physical inventories will be conducted at intervals not to exceed 6 months, to account for all sealed sources and devices received and possessed under the license."</p>	<p data-bbox="1141 426 1166 457" style="text-align: center;">*</p> <p data-bbox="1141 1623 1166 1654" style="text-align: center;">*</p>	<p data-bbox="1271 499 1312 531" style="text-align: center;">[ ]</p> <p data-bbox="1271 867 1312 898" style="text-align: center;">[ ]</p> <p data-bbox="1271 1623 1312 1654" style="text-align: center;">[ ]</p>

APPENDIX C

Item No.	Suggested Response	Yes	Description Attached
10.	<p><b>RADIATION SAFETY PROGRAM (Cont'd)</b></p> <p><b>Occupational Dose</b></p> <p>State that: "we have done a prospective evaluation and determined that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10% of the allowable limits in 10 CFR Part 20," or "we will monitor individuals in accordance with the criteria in the section entitled 'Radiation Safety Program - Occupational Dose' in NUREG - 1556, Vol. 7, 'Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Academic, Research and Development and Other Licenses of Limited Scope,'" dated December 1999."</p> <p><b>Public Dose</b></p> <p>No response is required from the applicant in a license application.</p> <p><b>Safe Use of Radionuclides and Emergency Procedures</b></p> <p>Develop and maintain procedures for safe use and emergencies. State that such procedures have been developed.</p> <p>If an emergency response plan is needed, submit it as a separate part of the application.</p>	<p>*</p> <p>N/A</p> <p>*</p> <p>[ ]</p>	<p>[ ]</p> <p>N/A</p> <p>[ ]</p> <p>[ ]</p>

Item No.	Suggested Response	Yes	Description Attached
10.	<p><b>RADIATION SAFETY PROGRAM (Cont'd)</b></p> <p><b>Survey</b></p> <p>State that: "We will survey our facility and maintain contamination levels in accordance with the survey frequencies and contamination levels published in Appendix Q to NUREG - 1556, Vol. 7, 'Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999. Leak tests will be performed at the intervals approved by NRC or an Agreement State and specified in the SSD Registration Certificate. 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 sealed source or plated foil manufacturer's (distributor's) and kit supplier's instructions."</p>	<p>*</p> <p>[ ]</p>	<p>[ ]</p>

APPENDIX C

Item No.	Suggested Response	Yes	Description Attached
10.	<p><b>RADIATION SAFETY PROGRAM (Cont'd)</b></p> <p style="text-align: center;"><b>OR</b></p> <p>State that: "We will survey our facility and maintain contamination levels in accordance with the survey frequencies and contamination levels published in Appendix Q to NUREG - 1556, Vol. 7, 'Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999. Leak tests will be performed at the intervals approved by NRC or an Agreement State and specified in the SSD Registration Certificate. 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 sealed source or plated foil manufacturer's (distributor's) and kit supplier's instructions. As an alternative, we will implement the model leak test program published in Appendix R to NUREG - 1556, Vol. 7, "Consolidated Guidance about Materials Licenses: 'Program-Specific Guidance About Academic, Research and Development, and Other Licensees of Limited Scope,' dated December 1999."</p> <p><b>Transportation</b></p> <p>No response is needed from applicants during the licensing phase.</p>	<p>[ ]</p> <p>N/A</p>	<p></p> <p>N/A</p>

Item No.	Suggested Response	Yes	Description Attached
10.	<p><b>RADIATION SAFETY PROGRAM (Cont'd)</b></p> <p><b>Minimization of Contamination</b></p> <p>The applicant does not need to provide a response to this item under the following condition. NRC will consider that the above criteria have been met if the applicant's responses meet 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>	N/A	N/A
11.	<p><b>WASTE MANAGEMENT</b></p> <p>State that: "We will use the model waste procedures published in Appendix T to NUREG - 1556, Vol. 7, 'Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999."</p> <p style="text-align: center;"><b>OR</b></p> <p>"We will use the (<i>specify either (1) Decay-In-Storage, (2) Disposal of Liquids Into Sanitary Sewerage</i>) model waste procedures that are published in Appendix T to NUREG - 1556, Vol. 7, 'Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999."</p>	* [ ] [ ]	[ ]



**Forster, Sara**

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**From:** Forster, Sara  
**Sent:** Friday, July 17, 2015 4:02 PM  
**To:** brownj@wabash.edu  
**Subject:** Additional Information Request for Wabash College, NRC License No. 13-07419-02  
**Attachments:** 03620.586232.13-07419-02 teleconsigned.pdf

Dear Dr. Brown,

See the attached file for additional information needed to complete the review of the renewal application for the above referenced license. Note that the attached 16-page conversation record (3 pages of text plus 13 pages of supplemental guidance materials, for your convenience) requests additional information on or before close of business on August 14, 2015. Additional guidance may be found in NUREG 1556, Vol. 7, "Program Program-Specific Guidance About Academic, Research and Development, and other Licenses of Limited Scope," which may be found at:

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/v7/>

Submission of your response as a pdf file attached to an email or via facsimile will allow for the quickest processing. Do not hesitate to call me with any questions you may have, or if you will need additional time to complete your response.

Sincerely,

**Sara A. Forster, Health Physicist Licensing Reviewer**  
U.S. Nuclear Regulatory Commission - Region III  
Division of Nuclear Materials Safety  
2443 Warrenville Rd. - Ste. 210  
Lisle, IL 60532-4352  
[sara.forster@nrc.gov](mailto:sara.forster@nrc.gov)  
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