UNIVERSITY OF NOTRE DAME

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Risk Management and Safety

September 9, 2019

Licensing Section
USNRC, Region III
2443 Warrenville Road
Lisle, Illinois 60523-4352

Reference: Control Number 612298

Subject: RSO Appointment for RML 13-01983-15

Dear Mr. Tran:

We confirm that we do need to appoint Mary Beth Greendonner as the RSO for our radioactive material license. We have attached the previous documentation to support this RSO change request: original NRC request and answers to your original questions.

We retract the letter dated June 27, 2019. Andy Welding could be available to us for emergencies but is not available for the routine RSO support that is required for the daily operation of our NRC license.

James Hatten, SAHCI Senior Health Physics Consultant, is providing support to our radiation safety program during this transition period. He is authorized to speak to the NRC staff on our behalf to ask question and to provide verbal information for our license. He is not authorized to sign RML documents. Jim has significant RSO experience on several RMLs. He will be providing onsite and telephone support to this license. He will attend the planned September 18, 2019 RSC meeting.

Thank you for the support of our RML. If you need any further information to processing this request please contact me at mgreendo@nd.edu or 574.631.8906.

Sincerely,

Mary Beth Greendonner

Mary Beth Greendonner
Associate Director, Risk Management & Safety

September 9, 2019

RSO Delegation

You **Mary Beth Greendonner** are appointed as the RSO for the University of Notre Dame. The RSO's duties and responsibilities include the management of the day-to-day operation of the radiation safety program and compliance with the regulations for the use of byproduct material. You will work closely with the RSC and executive management in implementing the radiation safety program. The RSO must ensure that radiation safety activities are being performed safely according to approved policies and procedures, and that all regulatory requirements are met. The Radiation Safety Officer is responsible for identifying radiation safety problems; initiating, recommending, or providing corrective actions; verifying implementation of corrective actions; and ensuring compliance with regulations for the use of byproduct material. As the RSO you have full access to all activities involving the use of byproduct material and the authority to terminate any activity in which health and safety appear to be compromised without consulting with executive management or the RSC, if required. The Radiation Safety Officer is hereby delegated the authority necessary to meet these responsibilities.

Mike Seamon, Vice President Campus Safety and University Operations

I accept the duties and responsibilities as the RSO.

Mary Beth Greendonner

UNIVERSITY OF NOTRE DAME

636 Grace Hall
Notre Dame, Indiana 46556 USA

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Risk Management and Safety

June 28, 2019

Health Physicist, Materials Licensing Branch
U.S. Nuclear Regulatory Commission, Region III
2443 Warrenville Road, Suite 210
Lisle, Il 60532-4352

License No. 13-01983-15
Docket No. 030-00694
Mail Control No. 612298

Dear Mr. Tran:

This is in response to your request for more information regarding the training and experience required for Mary Beth Greendonner to serve as the Radiation Safety Officer for the University of Notre Dame. A statement of delegation of authority from University Management will be sent at a later date.

Although Ms. Greendonner has not attended a formal course designed for RSOs, she has completed the comprehensive Radiation Safety Program designed for all aspects or radioactive material work at the University of Notre Dame. Details of the training's content is described in our license renewal application of June 26, 2017. This includes specifics of radiation activity and dose measurements, dose limits, contamination control, and waste disposal protocols. She has also had hands-on training and experience in the use of survey meters and swipe tests, watched and critiqued staff members as they conducted these tests and trained individuals. Much of this experience has been acquired in labs in which up to millicurie quantities of Np-237 and Pu-239 are used. She has also participated in the surveys and alarm testing with sources subject to the requirements of 10 CFR Part 37. She has been approved for unescorted access to these sources, and has been designated by the University to serve as a Reviewing Official along with the current RSO.

In response to Item 3 in your letter of June 25, 2019, we are addressing the Ms. Greendonner's experience (in red) in the duties listed in Item7.3 of our renewal application of June 22, 2017. She has been involved in these activities for over two years, and her total time with them well exceeds 40 hours.

As stated in the response to Duty 5, much of this work involves either actinides or sources subject to 10 CFR Part 37. She has been approved for unescorted access to those sources. Most of the work with actinides is conducted in activities ranging from nanocuries to millicuries.

Radiation Safety Officer.

The Radiation Safety Officer shall be approved by the Radiation Control Committee and shall be a person who has training in Radiological Health. The responsibilities of the Radiation Safety Officer and his authorized representatives are:

Ms. Greendonner has been approved by Notre Dame's Radiation Control Committee.

1. To maintain radiation exposures at the lowest feasible level by the supervision or operation of an effective and appropriate radiation protection program.

Ms. Greendonner has reviewed practices and dosimetry reports with the current RSO over the past two years.

2. To provide a training course in radiation safety to new radiation personnel.

The University of Notre Dame provides both on-line and in-person training. Ms Greendonner has participated in this training.

3. To assure that personnel monitoring devices are used where indicated and that records are kept of the results of such monitoring.

See response to Item 1 above.

4. To advise all personnel working with radioactive material and radiation producing devices of their annual radiation exposures.

See response to Item 1 above.

5. To conduct periodic radiation surveys and keep records of such surveys (as defined in Item 10 of this license) including descriptions of corrective measures.

Ms. Greendonner has accompanied both the current RSO and the Safety Specialist on numerous lab surveys, observed the counting processes, and completion of the survey reports. She has participated in the process of reporting contamination events to the affected laboratories. Much of this work involves the laboratories in which actinides such as Np-237 and Pu-239 are used. She has also participated in surveys and alarm quality control tests in the area housing materials subject to the requirements of 10 CFR Part 37.

6. To investigate each case of excessive or abnormal exposure to determine the cause and take steps to prevent its recurrence.

As stated above, Ms. Greendonner has reviewed dosimetry report with the current RSO. No excessive exposures have been reported during the time of her employment at Notre Dame.

7. To supervise disposal of radioactive materials and maintain disposal records.

Ms. Greendonner has reviewed these processes and reports with the current RSO over the past two years.

8. To provide consulting services in all aspects of radiation protection.

Ms. Greendonner has worked extensively with the current RSO in consultations of this type.

9. To report interim activities at each meeting of the Radiation Control Committee.

Ms. Greendonner has been present at meetings when the current RSO has reported activities.

10. To submit to the Radiation Control Committee for their approval or recommendations, all proposals from Responsible Investigators for new uses and/or changes in the use of radioactive isotopes.

Ms. Greendonner has reviewed these processes and reports with the current RSO over the past two years.

11. To maintain a complete inventory of all radioactive isotopes on campus and at off-campus sites to assure that the University remains within its authorized possession limits.

Ms. Greendonner has reviewed these processes and reports with the current RSO over the past two years.

12. To receive, approve, validate and record all requisitions submitted by Responsible Investigators prior to being sent to the University Purchasing Department.

Ms. Greendonner has reviewed these processes and reports with the current RSO over the past two years.

13. To suspend operations in any facility where it is evident that health hazards exist to the extent of endangering life or property or to the extent that continued operation would result in violation of existing federal, state or University regulations. Actions of this nature shall, so far as possible, be a joint decision with the Area Radiation Safety Officer. The Radiation Control Committee shall be advised of any suspension of operations at the earliest possible time. (See Attachment 3)

This has not been necessary during the time in which Ms. Greendonner has been at Notre Dame.

14. To provide Area Radiation Safety Officers, upon request, records of isotopes, surveys, etc., of Responsible Investigators under their jurisdiction.

This has not been necessary during the time in which Ms. Greendonner has been at Notre Dame.

15. To examine certain incoming packages in accordance with 10 CFR 20.1906 and to examine all packages of radioactive material leaving the institution.

Ms. Greendonner has participated in these processes with the current RSO.

16. To perform leak tests on sealed sources requiring such tests, and maintain records of those tests.

Ms. Greendonner has participated in these processes with the current RSO.

17. To assure compliance with rules, regulations, and permits.

In her position of Associate Director of Risk Management and Safety, Ms. Greendonner has worked extensively to assure compliance with regulations in all aspects of safety.

18. To monitor and maintain absolute and other special filter systems.

Ms. Greendonner is now working with the Chair of the Radiation Control Committee and the current RSO in updating the filter system for our acitinide labs.

19. To oversee radioactive material storage.

Ms. Greendonner has participated in these processes with the current RSO.

20. To oversee instrument calibration program.

Ms. Greendonner has participated in these processes with the current RSO.

21. To oversee decommissioning, decontamination, and recovery operations.

Ms. Greendonner has participated in these processes with the current RSO.

I will continue to perform the Radiation Safety Officer (RSO) duties for the University of Notre Dame until such time that a qualified RSO is named on our license. See my letter of June 27, 2019.

Please let me know if any further information is required in this matter.

Sincerely,

Andrew G. Welding, RSO

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

JUN 25 2019

Andrew G. Welding
Radiation Safety Officer
University of Notre Dame du Lac
636 Grace Hall
Risk Management and Safety
Notre Dame, IN 46556

Dear Mr. Welding:

We have reviewed your amendment request dated May 20, 2019 requesting to name a new Radiation Safety Officer (RSO), Ms. Mary Beth Greendonner. Based on the review, we will need the following information regarding her training and experience related to your radiation safety program.

1) A copy of the delegation of authority for RSO. A sample is attached for your reference.

2) Information about her training and experience commensurate with the licensed material and authorized activities listed in Items 6, 7, 8 and 9 in your license. The training should include the following subjects: a) radiation protection principles, b) characteristics of ionizing radiation, c) units of radiation dose and quantities, d) radiation detection and measurement instrumentation, e) biological hazards of exposure to radiation (appropriate to types and forms of licensed material to be possessed and used listed in the license), f) applicable NRC regulatory requirements and standards (10 CFR part 19, 20, 21, 30, 31, 33, 37, 40, 70, 71, etc.), and g) hands-on use of radioactive materials commensurate with the uses listed in Item 9 of your license (radionuclides, physical/chemical forms, quantities handled, activities performed, duration of experience, and company/entity where the hands-on use was experienced.)

   The amount of training and experience will depend on the radionuclide, form, possession limit, and use of the licensed material listed in the license. For instance, in addition to a college degree, RSOs at most broad scope licensees should be specialists in the field of radiation protection and may need at least 40 hours of radiation safety training specific to their job duties, as well as a year of experience with similar types, forms, quantities, and uses of radioactive material before the individual is qualified to be an RSO.

   The RSO designee should have obtained the above training in formal course(s) designed for RSOs, presented by an academic institution, commercial radiation safety consulting company, or a professional organization of radiation protection experts. In addition, the proposed RSO's experience should be sufficient to identify and control the anticipated radiation hazards. For example, the RSO should have experience planning and conducting evaluations, surveys, and measurements similar

to those required by the licensee's radiation safety program.

3) Address the RSO's experience in performing each of the duties listed in Item 7.3, "Radiation Safety Officer" in your renewal application (NRC Form 313) dated June 22, 2017, including when and where the experience was gained, and the type, form, and quantity of radionuclides involved.

In addition, the application noted that you, current RSO named on the license, will be retiring on June 30, 2019. During a telephone call with you on June 25, 2019, you stated that you will continue performing the RSO's duties until a qualified RSO be named on the license. Please provide a confirmation for the above in writing.

To continue the review of your amendment request, we request that you submit a written response to this letter by July 25, 2019. Your response must be dated and signed by a licensee's representative and please reference Mail Control Number 612298 in the response. To expedite the licensing process, you could fax your response to 630-515-1078. If you have any questions or require clarification on any of the information stated above, please do not hesitate to contact me at 630-829-9887 or frank.tran@nrc.gov.

In accordance with Title 10 of the *Code of Federal Regulations* Section 2.390 of the U.S. Nuclear Regulatory Commission's (NRC) "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

Sincerely,

Frank P.D. Tran
Health Physicist
Materials Licensing Branch

License No. 13-01983-15
Docket No. 030-00694

Song, Taehoon

From: Tran, Frank
Sent: Tuesday, September 10, 2019 4:40 PM
To: Pavon, Sandy; Song, Taehoon; Tomczak, Tammy
Cc: Pelke, Patricia
Subject: FW: RSO Appointment for RML 13-01983-15
Attachments: RSO Appointment for RML 13-01983-15.pdf

Dear IM Center,

Please process the document in as an amendment for 13-01983-15.

Thank you,
-Frank

From: Marybeth Greendonner <mgreendo@nd.edu>
Sent: Tuesday, September 10, 2019 2:08 PM
To: Tran, Frank <Frank.Tran@nrc.gov>
Cc: Jim Hatten <jhatten@sahci.com>
Subject: [External_Sender] RSO Appointment for RML 13-01983-15

Mr. Tran,

We are confirming that Notre Dame University does need to appoint Mary Beth Greendonner as the RSO for our radioactive material license.

Please see the attached documentation to support this change. If you need any further information to process this request please contact me at this email address or 574.631.8906.

Sincerely,

Mary Beth Greendonner
Associate Director, Risk Management & Safety
University of Notre Dame