PURDUE UNIVERSITY | Administrative Operations

ENVIRONMENTAL HEALTH AND SAFETY

December 16, 2025

Bryan Parker

Nuclear Regulatory Commission, Region III

Materials Licensing Branch

RE: Notification of Interim RSO

NRC License nos. 13-02812-04, SUD-296, and SNM-142

Dear Bryan Parker,

Please find the attached delegation of authority executed by Dr. Jason Harris and I appointing Dr. Harris as interim Radiation Safety Officer for Purdue University, with responsibility for NRC license nos. 13-02812-04, SUD-296, and SNM-142, to serve until a permanent RSO is selected and appointed.

This appointment has been internally acknowledged by our radiation safety committee.

Please let me know if you have any questions or require additional information.

Sincerely,

Eric Butt

Senior Director of Environmental Health and Safety

Hampton Hall of Civil Engineering, Room B173
550 Stadium Mall Drive | West Lafayette, IN 47907-2051
(765) 494-6371

Model Delegation of Authority for Radiation Safety Officer

Memo To: Radiation Safety Officer
From: Chief Executive Officer
Subject: Delegation of Authority

You, JASON HARRIS, have been appointed radiation safety officer on NRC license nos. 13-02812-04, SUD-296, and SNM-142 and are responsible for ensuring the safe and secure use of radiation. You are responsible for managing the Radiation Protection Program; identifying radiation protection problems; initiating, recommending, or providing corrective actions; verifying implementation of corrective actions; stopping unsafe activities; and ensuring compliance with regulations. You are hereby delegated the authority necessary to meet those responsibilities, including prohibiting the use of byproduct material by employees who do not meet the necessary requirements and shutting down operations, when justified, to maintain radiation safety. You are required to notify management if staff does not cooperate and does not address radiation safety issues. In addition, you are free to raise issues with the U.S. Nuclear Regulatory Commission at any time. It is estimated that you will spend 10 hours per week conducting radiation protection activities.

Signature of Management Representative

12/16/25
Date

I accept the above responsibilities,

Signature of Radiation Safety Officer

12/16/25
Date

cc: **Affected department heads**

[Type here]

PURDUE UNIVERSITY | Administrative Operations

ENVIRONMENTAL HEALTH AND SAFETY

December 19, 2025

Mr. Bryan Parker

Mr. Jason Kelly

Mr. Stephen Poy

Nuclear Regulatory Commission, Region III

Materials Licensing Branch

RE: Notification of Interim RSO

NRC License nos. 13-02812-04, SUD-296, and SNM-142

Dear Mr. Bryan Parker, Mr. Jason Kelly, and Mr. Stephen Poy,

Please find the attached delegation of authority executed by Mr. Thomas Grier and I appointing Mr. Grier to Radiation Safety Officer for Purdue University, with responsibility for NRC license nos. 13-02812-04, SUD-296, and SNM-142. This appointment has been internally approved by our radiation safety committee.

Please let me know if you have any questions or require additional information.

Sincerely,

Eric Butt

Senior Director of Environmental Health and Safety

Hampton Hall of Civil Engineering, Room B173
550 Stadium Mall Drive | West Lafayette, IN 47907-2051
(765) 494-6371

Model Delegation of Authority for Radiation Safety Officer

Memo To: Radiation Safety Officer
From: Chief Executive Officer
Subject: Delegation of Authority

You, THOMAS GIZIER, have been appointed radiation safety officer on NRC license nos. 13-02812-04, SUD-296, and SNM-142 and are responsible for ensuring the safe and secure use of radiation. You are responsible for managing the Radiation Protection Program, identifying radiation protection problems, initiating, recommending, or providing corrective actions, verifying implementation of corrective actions, stopping unsafe activities, and ensuring compliance with regulations. You are hereby delegated the authority necessary to meet those responsibilities, including prohibiting the use of byproduct material by employees who do not meet the necessary requirements and shutting down operations, when justified, to maintain radiation safety. You are required to notify management if staff does not cooperate and does not address radiation safety issues. In addition, you are free to raise issues with the U.S. Nuclear Regulatory Commission at any time. It is estimated that you will spend 40 hours per week conducting radiation protection activities.

ERIC BUTT — 12/19/2025

Signature of Management Representative — Date

I accept the above responsibilities,

Thomas Gizier — 12/19/2025

Signature of Radiation Safety Officer — Date

cc: **Affected department heads**

Thomas Grier, MS
PhD Candidate, Health Physics
School of Health Sciences
Purdue University
550 Stadium Mall Drive
West Lafayette, IN 47907
Email: trgrier@purdue.edu

EDUCATION

2024 – Present	Ph.D. Health Physics	Purdue University, West Lafayette, IN
2022 – 2024	M.S. Health Physics	Purdue University, West Lafayette, IN
2014 – 2018	B.A. Physics, Mathematics	DePauw University, Greencastle, IN

EXPERIENCE

Research and Teaching Assistant	Purdue University	2023 – Present
Lab Manager and Part-Time Instructor of Physics and Astronomy	DePauw University	2018 – 2024
Radiation Safety Officer	DePauw University	2021
Assistant Radiation Safety Officer	DePauw University	2020 – 2021

TEACHING

Purdue University, 2024 – Present

HSCI 514	Radiation Instrumentation Laboratory	Teaching Assistant	Spring 2025
HSCI 101	Introduction to the Health Sciences Professions	Teaching Assistant	Fall 2024
HSCI 696	Graduate Seminar	Teaching Assistant	Fall 2024

DePauw University, 2018 – 2024

PHYS 120L	Principles of Physics I Laboratory	Instructor	6 sections
PHYS 130L	Principles of Physics II Laboratory	Instructor	1 section
PHYS 220L	Principles of Physics III (Modern) Laboratory	Instructor	2 sections

GRANTS & FELLOWSHIPS

1. Student Travel Grant. Health Physics Society, 2025
2. EPA Buried Lead Infrastructure. Graduate Researcher, 2025
3. Robert Gardner Fellowship Award. Health Physics Society, 2023
4. Student Travel Grant. Health Physics Society, 2023
5. DoD CRMP 12971061. Graduate Researcher, 2023-2024
6. J. William Asher and Dorothy A. Asher Endowed Fund in the Social Sciences. DePauw University, 2022
7. Improving Undergraduate STEM Education (IUSE) Grant. DePauw University, 2019

Submitted Grants

8. National Geographic Spatial Thinking, 2025

AWARDS

1. Tim and Sonya Kirkham Scholarship, Purdue School of Health Sciences, 2025
2. International Society for Trace Element Research in Human (ISTERH), Poster Presentation 1st Place, 2024
3. Tim and Sonya Kirkham Scholarship, Purdue School of Health Sciences, 2024
4. American Industrial Hygiene Association (AIHA) Chicago Student Night, Graduate Student Presentations 1st Place, 2024
5. Purdue School of Health Sciences Annual Research Retreat, Platform Presentation 1st Place, 2024

PUBLICATIONS

1. **TR Grier**, SS Costa, B Faber, S Cooper, K Dean, M Martin, BP Jackson, T Katzner, AJ Specht. Feasibility and Accuracy of In Vivo and Ex Vivo XRF Bone Lead Assessment Wild Birds: an Example with Black Vultures. Journal of Trace Elements in Medicine and Biology, 2025.
2. KE Adesina, CJ Burgos, **TR Grier**, ASM Sayam, AJ Specht. Ways to Measure Metals: From ICP-MS to XRF. Current Environmental Health Reports, 2025
3. TE Katzner et al. Safety and immunogenicity of a poultry vaccine to provide protection from Highly Pathogenic Avian Influenza for a critically endangered species. Emerging Infectious Diseases, 2025
4. AJ Specht, C Hoover, **TR Grier**. Portable x-ray fluorescence for bone lead measurement: Current approaches and future directions. Environmental Research, 2024
5. CJ Burgos, D Read, **TR Grier**, M Khan, MG Weisskopf, KM Taylor, AJ Specht. Dosimetry Testing for a new in vivo X-ray Fluorescence Measurement System. Health Physics Journal, 2024
6. FD Albareti et al. The 13th Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-IV Survey Mapping Nearby Galaxies at Apache Point Observatory. The Astrophysical Journal Supplement Series, 2017.

Works in Progress

7. **TR Grier**, DI Goodman, KM Taylor, SP Proctor, MG Weisskopf, and AJ Specht. Mobile KXRF Bone Lead Measurements using Cd-109 and CZT Detectors. *Submitted*: Environmental Research, 2025
8. **TR Grier**, CJ Burgos, M Khan, MG Weisskopf, KM Taylor, SP Proctor, and AJ Specht. Experimental design and testing of a portable x-ray tube based KXRF system to measure lead in bone.
9. KE Adesina, JA DiNatale, **TR Grier**, and AJ Specht. Feasibility of a novel optically filtered Monochromatic portable X-ray fluorescence (MXRF) to quantify lead in black vulture bones.
10. **TR Grier**, JF Obrycki, MG Weisskopf, and AJ Specht. Energy Dispersive X-ray Fluorescence Provides New Option for Measuring Arsenic, Cadmium, Lead, and Mercury in Dried Blood Spots.
11. KE Adesina; **TR Grier**; K Alfredo, AJ Specht. Lead detection in dark chocolates by benchtop energy-dispersive X-ray Fluorescence and dietary ingestion thresholds for adults and children. *Submitted:* Food Control, 2025
12. S Smith, M Brokaw, **T Grier**, A Specht, C Roper. Assessing Airborne Gunshot Residue PM2.5: Chemical Composition and Real-Time Exposure Concentrations at an Outdoor Shooting Range. *Submitted:* Water, Air, & Soil Pollution, 2025

ABSTRACTS & PRESENTATIONS

1. AJ Specht, N Batbaatar, **TR Grier**, C Jia, A Suarez, MP Anastario, JD Spengler. Tire and road emissions generation and characterization. Tire Emissions Research Conference. Sep 2025. Boston, MA
2. **TR Grier**, CN Hadu, DT Novak, Y Zhang, AJ Specht, DI Goodman. Determination of Lead Use in Buried Water Service Lines. ISES-ISEE. Aug 2025. Atlanta, GA

3. AJ Specht, A Vogt, IC Lindsay, EM Wells, K Rubaii, **TR Grier**. Bone Lead and Uranium Measurements from Postwar Fallujah, Iraq. ISES-ISEE. Aug 2025. Atlanta, GA
4. **TR Grier**, S Silva Costa, B Faber, S Cooper, K Dean, M Martin, B Jackson, TE Katzner, AJ Specht. Lead Exposure Assessment in Wild Black Vultures Using Portable and Benchtop X-Ray Fluorescence Compared to ICP-MS. Ohio Valley Society of Toxicology July 25, 2025
5. **TR Grier**, CN Hadu, DT Novak, Y Zhang, AJ Specht, DI Goodman. Determination of Lead Use in Buried Water Service Lines. Health Physics Society Annual Meeting 2025. Madison, WI
6. KE Adesina, AA DiNatale, **TR Grier**, AJ Specht. Feasibility of a novel optically filtered Monochromatic portable X-ray Fluorescence (MXRF) to quantify lead in bone and soft tissues. Health Physics Society Annual Meeting 2025. Madison, WI
7. **TR Grier**, S Silva Costa, B Faber, AJ Specht, TE Katzner. Evaluating Bone Lead Measurements Using XRF in Black Vultures: Comparisons across Time and Analytical Methods. Purdue OIGP Spring Reception. May 7, 2025. West Lafayette, IN
8. **TR Grier**, CJ Burgos, M Khan, MG Weisskopf, KM Taylor, AJ Specht. Experimental design and testing of a portable x-ray tube based KXRF system to measure lead in bone. Purdue JUWELS for Posterity Poster Session. Apr 10, 2025. West Lafayette, IN
9. DT Novak, **TR Grier**, AJ Specht. Advancing the use of X-Ray Fluorescence in obscured lead pipe detection. Purdue OUR Spring 2025 Research symposium. Apr 8, 2025. West Lafayette, IN
10. **TR Grier**, M Khan, G Osakwe, MG Weisskopf, AJ Specht. X-ray fluorescence measurements of blood samples: In-field and lab-based methods. Purdue HHS Life Inspired Week. Apr 4, 2025. West Lafayette, IN
11. **TR Grier**, S Silva Costa, B Faber, AJ Specht, TE Katzner. Evaluating Bone Lead Measurements Using XRF in Black Vultures: Comparisons Across Time and Analytical Methods. Purdue School of Health Sciences 6th Annual Research Retreat. Feb 28, 2025. West Lafayette, IN
12. **TR Grier**, AJ Specht. Sexual Dimorphism in Cumulative Metal Measurements in Bone and Teeth. International Society for Trace Element Research in Human (ISTERH). Oct 2024. Murcia, Spain
13. **TR Grier**, M Khan, G Osakwe, MG Weisskopf, AJ Specht. X-ray Fluorescence Measurements of Blood Samples: In-field and Lab Based Methods. International Society for Trace Element Research in Human (ISTERH). Oct 2024. Murcia, Spain
14. AJ Specht, **TR Grier**. Multi-toxicant measurements of dried blood spots using x-ray fluorescence. Aug 2024. Santiago, Chile.
15. **TR Grier**, M Khan, G Osakwe, MG Weisskopf, AJ Specht. X-ray fluorescence measurements of blood samples: In-field and lab-based methods. Health Physics Society Annual Meeting. Jul 2024. Orlando, FL
16. **TR Grier**, CJ Burgos, M Khan, MG Weisskopf, KM Taylor, AJ Specht. Measuring lead in bone with K-shell X-ray Fluorescence: a comparison between previous, present, and future methodologies. American Industrial Hygiene Association Chicago Local Section Student Night. Apr 10, 2024. Chicago, IL
17. **TR Grier**, CJ Burgos, M Khan, MG Weisskopf, KM Taylor, AJ Specht. Experimental design and testing of a portable x-ray tube based KXRF system to measure lead in bone. Society of Toxicology (SOT) 63rd Annual Meeting. Mar 11, 2024. Salt Lake City, UT
18. **TR Grier**, CJ Burgos, M Khan, MG Weisskopf, KM Taylor, AJ Specht. Measuring lead in bone with K-shell X-ray Fluorescence: a comparison between present and previous methodologies and outlook. Purdue School of Health Sciences Seminar. Mar 5, 2024. West Lafayette, IN
19. **TR Grier**, CJ Burgos, M Khan, MG Weisskopf, KM Taylor, AJ Specht. Experimental Design and Testing of a X-ray Tube Based KXRF System. Purdue School of Health Sciences 5th Annual Research Retreat. Mar 1, 2024. West Lafayette, IN

20. **TR Grier**, CJ Burgos, M Khan, MG Weisskopf, KM Taylor, AJ Specht. Feasibility of a portable x-ray tube based KXRF system to measure lead in bone. Purdue HHS Fall Research Day. Nov 2, 2023. West Lafayette, IN
21. **TR Grier**, CJ Burgos, M Khan, MG Weisskopf, KM Taylor, AJ Specht. Feasibility of a portable x-ray tube based KXRF system to measure lead in bone. Purdue Institute for a Sustainable Future. Oct 25, 2023. West Lafayette, IN
22. **TR Grier**, CJ Burgos, M Khan, MG Weisskopf, KM Taylor, AJ Specht. Feasibility of a portable x-ray tube based KXRF system to measure lead in bone. International Society of Exposure Science Conference. Aug 30, 2023. Chicago, IL
23. M Khan, CJ Burgos, **TR Grier**, MG Weisskopf, KM Taylor, AJ Specht. Experimental design and testing of a portable x-ray tube based KXRF system to measure lead in bone. Health Physics Society Annual Meeting. Jul 26, 2023. National Harbor, MD
24. CJ Burgos, **TR Grier**, M Khan, MG Weisskopf, KM Taylor, AJ Specht. Dosimetry for a new in vivo X-ray Fluorescence Measurement System. Health Physics Society Annual Meeting. Jul 25, 2023. National Harbor, MD

PROFESSIONAL AND SCHOLARLY ASSOCIATIONS

Health Physics Society (HPS)	2023 – Present
Purdue Health Physics Society	2023 – Present
American Industrial Hygiene Association (AIHA)	2024 – Present
International Society for Trace Element Research in Humans (ISTERH)	2024 – Present
Society of Toxicology (SOT)	2024 – Present

OTHER RESEARCH

Light Pollution Research in Putnam County, IN — Summer 2022
DePauw University — Greencastle, IN

Continued work on surveying methods of light pollution as a co-investigator supervising students. This project was funded by the J. William Asher and Dorothy A. Asher Endowed Fund in the Social Sciences.

Light Pollution Research in Putnam County, IN — Summer 2017
DePauw University — Greencastle, IN

Constructed a weather observing apparatus with an Arduino Uno board that records weather conditions as well as sky brightness. Also constructed a survey of light pollution in Putnam County to generate a light pollution map. This project was funded by the J. William Asher and Dorothy A. Asher Endowed Fund in the Social Sciences.

TCU Research Experience for Undergraduates — Summer 2016
Texas Christian University — Fort Worth, TX

Learned and used Python to analyze open cluster membership using data collected by the Apache Point Observatory Galactic Evolution Experiment (APOGEE). This project was funded by the National Science Foundation Research Experience for Undergraduates (REU) program PHY–1358770.

SERVICE

Hazardous Waste Committee	DePauw University	2023 – 2024
Staff Council	DePauw University	2023 – 2024

Non-Salary Overhead Capacity Building Group	DePauw University	2023

TRAINING

Unsealed Radioactive Material Safety Training	Purdue University	2023 – 2025
Analytical X-ray Safety Training	Purdue University	2023 – 2025
Laser Safety Training: Class 3B and Class 4 Lasers	Purdue University	2023
Radiation Safety Officer (RSO) Training Course	Dade Moeller NV5	2020

Martha Pavon

From: Eric M Butt <embutt@purdue.edu>
Sent: Friday, January 9, 2026 11:40 AM
To: Bryan Parker; Stephen Poy; Jason Kelly
Cc: Pramitha Juristyarini
Subject: [External_Sender] Purdue University RSO update
Attachments: RSO Model Delegation of Authority Thomas Grier.pdf; Grier CV.pdf

All,

Please find the attached RSO memo and delegation of authority update for Purdue University. Thomas Grier is starting full time Jan. 12, 2026. His CV is attached for your review. Please let me know if you have any questions.

Eric Butt, MPA, SMP
Senior Director | *Environmental Health and Safety*
embutt@purdue.edu | 765-494-9227
550 Stadium Mall Drive
West Lafayette, IN 47907
https://www.purdue.edu/ehps/rem

Martha Pavon

From: Jason Kelly
Sent: Thursday, December 18, 2025 9:16 AM
To: Tammy Tomczak
Cc: Bryan Parker; Martha Pavon; Sandy Pavon
Subject: FW: Purdue University Interim RSO
Attachments: Interim RSO Model Delegation of Authority Jason Harris 2025 Signed letter.pdf

Tammy,

Attached is an incoming Amendment Request from Purdue University for Material License #13-02812-04, Source Material License #SUD-296 and Special Nuclear Material License #SNM-142. These requests will need to be assigned a Control Number and assigned to a license reviewer.

Please assign the amendment request for Source Material License #SUD-296 to me since I am currently working on the license renewal. The request for Special Nuclear Material License #SNM-142 will need to be routed to NMSS for action.

Jason M. Kelly, MPH, CPH
Health Physicist
U.S. NRC Region III – DRSS MLB
Phone: (630) 829-9737
E-mail: Jason.Kelly@nrc.gov

From: Eric M Butt <embutt@purdue.edu>
Sent: Thursday, December 18, 2025 8:55 AM
To: Bryan Parker <Bryan.Parker@nrc.gov>; Jason Kelly <Jason.Kelly@nrc.gov>
Subject: [External_Sender] Purdue University Interim RSO

Bryan and Jason,

Please find the attached interim RSO information for Purdue University.

Please let me know if additional information is needed or if you are aware of others that I should inform.

Eric Butt, MPA, SMP
Senior Director | *Environmental Health and Safety*
embutt@purdue.edu | 765-494-9227
550 Stadium Mall Drive
West Lafayette, IN 47907
https://www.purdue.edu/ehps/rem

Martha Pavon

From: Tammy Tomczak
Sent: Monday, January 12, 2026 6:04 AM
To: Martha Pavon
Cc: Sandy Pavon
Subject: FW: Additional Info for Purdue actions
Attachments: [External_Sender] Purdue University RSO update; FW: Purdue University Interim RSO

Good morning, Martha 😊

Can you please add the attached to ADAMS?

Thank you!!
Tammy

From: Bryan Parker <Bryan.Parker@nrc.gov>
Sent: Friday, January 9, 2026 12:56 PM
To: Tammy Tomczak <Tammy.Tomczak@nrc.gov>
Cc: Jason Kelly <Jason.Kelly@nrc.gov>
Subject: Additional Info for Purdue actions

Hey Tammy,

I believe we have open actions already open based on Jason's email from 12/18/25 (attached "Interim RSO" item). Assuming those actions have not been completed, the other attachment above ("RSO update") is additional information that needs to be added to those cases. Purdue has named a permanent RSO to replace the interim.

Please let me know if you have any questions.

Thanks.
Bryan