7/17/2024

Radiation Protection Program Review 2023

Texas A&M University

Environmental Health and Safety
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INTRODUCTION

This document provides a review of the Radiation Protection Program for Texas A&M University over the 2023 calendar year. Topics covered include an overview of the Radiation Protection Program scope and organization, followed by a review of several specific elements. Components which are vital to the strength of the program, such as training and maintenance of ALARA practices, are appraised. In addition to these items, a review of routine practices, such as waste disposal, internal and external audits and inspections, and changes to the program are discussed.

TEXAS A&M UNIVERSITY LICENSES AND REGISTRATIONS

Texas A&M University holds several federal and state licenses and registrations which authorize the use of byproduct radioactive materials, source materials, special nuclear materials, and radiation-producing devices (both ionizing and non-ionizing). In accordance with state and federal regulations (25 TAC §289.202 (e) (3) and 10 CFR 20.1101(c), respectively) this report reviews the activities conducted under the licenses and registrations for the calendar year 2023. An overview of the various licenses maintained by Texas A&M University is provided in Table 1.

Table 1 – Texas A&M University Licenses and Registrations

License No.	Issuing Agency	Expiration Date	Description
42-09082-09	United States Nuclear Regulatory Commission (USNRC)	October 31, 2033	Radioactive Materials License
L00448	Texas Department of State Health Services (TDSHS)	September 30, 2029	Radioactive Materials License
L05683	Texas Department of State Health Services (TDSHS)	August 31, 2024	Radioactive Materials License
L06561	Texas Department of State Health Services (TDSHS)	July 31, 2033	Radioactive Materials License
R00304	Texas Department of State Health Services (TDSHS)	September 30, 2031	Certificate of X-Ray Registration
R14497	Texas Department of State Health Services (TDSHS)	February 28, 2026	Certificate of Registration for Industrial Radiation Machines
Z00116	Texas Department of State Health Services (TDSHS)	April 30, 2029	Certificate of Registration for Lasers

42-09082-09

The U.S. Nuclear Regulatory Commission issues this license. It authorizes the University to use selected radionuclides at temporary job sites at sea aboard TAMU and other research vessels. One amendment to replace the RSC chair was submitted in 2023. The license expires on October 31, 2033.

L00448

The Texas Department of State Health Services (TDSHS) issues this broad scope license. This license authorizes the use of radioactive materials at the following sites: Texas A&M University - College Station, Texas A&M Health Science Center - Bryan, Texas A&M University at Galveston, Institute of Biosciences and Technology - Houston, and Texas A&M College of Dentistry - Dallas. Three amendments were approved in 2023. Amendment 161 for replacing the RSC chair, amendment 162 for financial assurance statement, and amendment 163 for exemption requirements for Category II source located at Nuclear Engineering and Science Center (NESC). The license expires on September 30, 2029.

L05683

The Texas Department of State Health Services issues this specific license. This license authorizes the use radioactive materials at designated remote sites inside Texas. The sites within the Bryan-College Station area include the University Services Building, RELLIS, and Texas A&M - College Station. The license also covers Texas A&M AgriLife Research and Extension Center sites in Beeville, Bushland, Dallas, Lubbock, Overton, Plainview, Uvalde, Vernon, and Weslaco. Prairie View A&M University is also covered by this license. Unlike the broad scope license L00448, license L05683 is relatively specific with regard to the radioactive materials that may be possessed, as well as the individuals authorized to use the materials. Amendment 46 was approved in 2023 and revised the address for site number 018 (RELLIS) to be 1041 Rellis Parkway. The license expires on August 31, 2024.

L06561

The Texas Department of State Health Services issues this specific license. It authorizes Texas A&M University Cyclotron Institute to produce radioactive material for research and development. Unlike the broad-scope license L00448, this license is relatively specific with regard to the radionuclides that can be produced using the cyclotron and the individuals authorized to possess and use those radionuclides. The license was renewed in 2023, and the expiration date is July 31, 2033.

R00304

This registration is issued by The Texas Department of State Health Services and authorizes the University to possess and use radiation producing devices at a number of locations within

Texas. The authorized sites within the Bryan-College Station area include: Texas A&M University – College Station, RELLIS, University Services Building, Animal Science Complex, Texas A&M Health Family Care, and Texas A&M Health Science Center. Other sites include: Prairie View A&M University, Texas A&M University at Galveston, Texas A&M AgriLife Research and Extension Center sites in Beeville and Stephenville, Texas A&M Forest Service in Kirbyville, Texas Department of Criminal Justice Wynne Unit in Huntsville, TMC Helix Park in Houston, and the Institute of Biosciences and Technology in Houston. Three amendments and one renewal were submitted in 2023, two amendments were for adding new sites and one for changing the use category and for adding new units at site 004. The registration was renewed in August 2023, and the new expiration date is September 30, 2031.

R14497

This registration, issued by The Texas Department of State Health Services, authorizes the University to possess and use minimal threat and other industrial X-ray units aboard the JOIDES research vessel. No amendments were completed in 2023. The registration expires on February 28, 2026.

Z00116

This registration is issued by The Texas Department of State Health Services. It authorizes the possession and use of Class III B and Class IV lasers at Texas A&M University – College Station, RELLIS, Texas A&M University Health Science Center – Bryan, Texas A&M University at Galveston, Texas A&M University – Kingsville, Institute of Biosciences and Technology in Houston, Prairie View A&M University, and Texas A&M AgriLife Research and Extension Center sites in Stephenville and Lubbock. Four amendments were submitted in 2023, all of them for increasing the number of units in various sites. The registration expires on April 30, 2029.

RADIOLOGICAL SAFETY PROGRAM ORGANIZATION

Radiological Safety Committee

The Radiological Safety Committee (RSC) advises the Texas A&M University administration on matters related to radiological safety and recommends policies and procedures it deems appropriate to ensure an adequate radiological safety program. The RSC consists of at least six voting members, including the Chair, appointed by the Vice President, Division of Risk, Ethics and Compliance.

The RSC act as an advisory body to ensure that radioactive materials are safely used in accordance with “As Low As Reasonably Achievable (ALARA)” principles. The RSC also conducts audits of key areas of the radiation safety program typically three times a year in

which the entire program is reviewed over a period of three years. The RSC met three times during the 2023 calendar year.

Members	Department
Bryan Tomlin, Chair, Ph.D.	Center for Chemical Characterization
Jonathan Sczepanski, Ph.D.	Chemistry
Joseph Reibenspies, Ph.D.	Chemistry
Thomas Welsh, Ph.D.	Animal Science
Kris Hagel, Ph.D.	Cyclotron Institute
Jay Griffin, D.V.M.	Large Animal Clinical Sciences
Ky Pohler, Ph,D.	Animal Science
Malcolm Delovio, Ph.D.	Texas Veterinary Diagnostic Laboratory
Timothy Devarenne, Ph.D.	Biochemistry & Biophysics
Latha Vasudevan, Ph.D., CHP, *Ex-Officio*	Director, Radiological Safety Officer
Christina Robertson, CIH, CSP, *Ex-Officio*	Asst. Vice President, Environmental Health and Safety

Radiological Safety Staff

The radiological safety staff consists of individuals employed by Environmental Health and Safety, under the direction of the Radiological Safety Officer (RSO). In 2023, the radiological safety staff consisted of the RSO; One Senior Health Physicist /Assistant RSO; One Senior Health Physicist; Two Health Physicists; One Assistant Health Physicist III; Two Assistant Health Physicists II; Two Assistant Health Physicists I; and 5-6 student technicians. A part time program aide position for supporting scanning and storing documents in Laserfiche repository remained vacant. Towards the latter half of 2023, new career ladder position titles (Radiation Safety Specialist I and II) position titles were approved.

RADIOLOGICAL SAFETY PROGRAM ELEMENTS

Overview of Permits

Texas A&M Radiological Safety maintains three different kinds of radiation permits: Radioactive Material (RAM) permits, Radiation Producing Device (RPD) permits, and Laser permits. The NRC and TDSHS licenses are blanket licenses for the entire university. To adequately maintain oversight, Radiological Safety issues permits, or sub-licenses, to principal investigators authorizing them to possess and use specific quantities of RAM or specific devices. As of December 2023, there were a total of 94 RAM permits, 67 RPD permits possessing a total of 142 RPDs, and 110 laser permits possessing a total of 500 laser units. All RAM and RPD permit applications/amendments were being reviewed by the RSC members. In 2023, due to the large number of lasers on campus and at other sites, a new laser safety review

committee was formed and all laser permit applications/amendments were being reviewed by the laser safety review committee.

Radiological Safety Training

During 2023, several types of training were offered by EHS. There was a total of 25 live training sessions offered; 13 for General Radiation Safety Initial training and 12 for Veterinary Hospital Radiation Safety Initial training. A total of 417 people were trained in these sessions. An additional 3,931 people were trained via online training modules. Online course offered include refresher training for General Radiation Safety, refresher training for Veterinary Radiation Safety, General Radiation Producing Device (RPD), and Laser Safety. A summary of training provided by the radiological safety staff in 2023 is displayed in Table 2.

Table 2– Summary of radiological safety training provided in 2023

Training Type	Number of Times Offered in 2023	Number of Individuals Attended Training
General Radiation Safety Initial (Hybrid)	13	156
Veterinary Radiation Safety Initial (Hybrid)	12	261
General Laser Safety (Online)	--	1181
General Radiation Producing Device -RPD (Online)	--	624
Electron Beam Facility RPD Training (Online)	--	86
General Radiation Safety Refresher (Online)	--	356
Transportation Training for Moisture Gauge Users (Online)	--	81
Veterinary Hospital General Radiation Safety, Laser, and RPD Refresher (Online)	--	167
Veterinary Radiation Producing Device -Vet RPD (Online)	--	338
Other (Radiation Safety Awareness for Vet, MRI Safety, etc.)	--	681
Total	**25**	**3,931**

Instrument Calibration

Radiological safety staff provides response check services for instrumentation used by labs to verify their operation and efficiency. Radiological safety staff also facilitates the shipping and paperwork for instruments requiring calibration by outside entities. In 2023, 69 portable survey instruments were sent to the manufacturer for calibration. Radiological safety staff provided functional response checks for 77 instruments. Annual calibrations were also performed for 119 pocket ion chambers.

Radioactive Material Packages Received/Shipped

Radiological safety staff received and handled 136 radioactive material packages in 2023. These packages were inventoried and delivered to the corresponding Texas A&M laboratories. 29 radioactive packages were shipped to other licensed facilities outside of Texas A&M, 19 of which were Astatine-211 that were produced from Cyclotron Institute.

Surveys Performed

Radiological safety staff performed monthly contamination and compliance surveys of 108 laboratories in 30 different buildings, as well as special and as-needed surveys. In 2023, there were 472 surveys performed – an average of nearly 40 per month. There was a total of 25,752 contamination swipes collected and analyzed for the year. Weekly surveys are performed of the Radiological Safety Laboratory, vehicles, and waste storage locations.

Sealed Sources and Leak Tests

Radiological safety staff provide leak test services to authorized users with certified sealed sources. Leak tests are performed quarterly. These services are also provided, as a courtesy, to users possessing sources authorized under a general license. In 2023, leak tests were performed for 95 sealed sources (17 of which are neutron soil moisture gauges), and 21 generally licensed sources such as Ni-63 in gas chromatographs.

Special Nuclear Material

Special Nuclear Materials (SNM) that are possessed by the University are inventoried and verified on an annual basis. Radiological safety staff perform inventory verifications and prepare reports as required by 10 CFR 74 and the Nuclear Material Management and Safeguards System (NMMSS). These NMMSS reports were filed for the period 12/1/2022-11/30/2023 and were reconciled on February 6, 2024.

Review of External Dosimetry Data

This section addresses external dosimetry for the calendar year 2023. Through the end of 2023, 1781 individuals were monitored for external occupational radiation exposure. Of those monitored, 1083 people (about 60%), had no reportable whole-body deep dose equivalent (DDE) above background. Of the remaining 698 individuals, ten individuals received doses exceeding 10% of the whole-body annual limit, or 500 mrem. These individuals received doses of 513, 515, 542, 1145, 1392, 1403,1568, 1714, 1741, and 2182 mrem. The remainder received doses ranging from 1 mrem to 500 mrem. The cumulative dose for all individuals monitored for the entire year was 23.1 person-rem. The average deep dose equivalent for those who received a measurable dose was approximately 15 mrem. A summary of these data is provided in Table 3 and Figure 1. The average DDE values shown in this table are deep dose equivalent averaged over individuals receiving a non-zero dose. Personnel were also monitored for whole-body shallow dose equivalent (or "skin dose," SDE) and dose equivalent to the lens of the eye (LDE). The highest SDE reported in 2023 was 2159 mrem. The highest LDE reported in 2023 was 2183 mrem. In addition to whole body dosimeters, some users were issued extremity dosimeters to measure dose to the hand, when applicable. The highest extremity dose equivalent noted for 2023 was 1570 mrem. The annual limit for DDE is 5 rem (5000 mrem), LDE is 15 rems and SDE is 50 rems.

The individuals with the highest reported doses work in Nuclear Medicine and Diagnostic Radiology at the Veterinary Teaching Hospital. Diagnostic and interventional procedures, such as X-ray, computed tomography, and fluoroscopy are common in the Veterinary Teaching Hospital, and account for the majority of dose received on campus.

For those individuals who received total effective dose equivalent of 100 mrem or higher, an annual dose report was provided as per 25 TAC 289.203(d). All occupational dose reports are on permanent file at Texas A&M University Environmental Health and Safety.

Table 3 - Summary of whole-body dose (DDE) by subaccount number

Department	Number Measured	Number w/ Measured Dose	Cumulative DDE (mrem)	Avg. DDE (mrem)	Max. DDE (mrem)
4th year students	375	304	7377	24	542
Athletics	10	0	0	0	0
Student Health Center	4	1	4	4	4
Bio	1	0	0	0	0
CCCA	3	1	1	1	1
Cyclotron Institute	770	14	62	4	23
E-beam	18	6	16	2.7	3

EHS	31	11	52	4.7	10
GI	27	10	584	58.4	515
Human Clinical	2	0	0	0	0
IBT	1	0	0	0	0
Joides Research Vessel	10	0	0	0	0
LA/Med Surg	26	8	489	61	243
LA/Res Int	27	14	594	42	235
Monthly	46	31	15495	500	2182
Nuclear Eng.	32	14	445	32	218
Office of the State Chemist	2	0	0	0	0
RELLIS	4	1	1	1	1
SA/Fac Med	20	17	744	44	215
SA/Res Int	76	71	1294	18	143
SA/Spec	17	17	289	17	55
School of Public Health	5	0	0	0	0
Staff/Anes	14	14	767	55	156
Staff/LA ICU	22	8	44	5.5	21
Staff/LA Med	28	9	272	30	105
Staff/LA OR	32	18	161	9	75
Staff/Misc	10	7	139	19.9	74
Staff/RAD	3	2	229	114.5	224
Staff/SA Cardio	3	1	10	10	10
Staff/SA Dental	1	0	0	0	0
Staff/SA ER	41	34	1363	40.1	147
Staff/SA Int Med	7	6	158	26.3	64
Staff/SA Neuro	4	3	30	10	17
Staff/SA Onco	14	11	238	22	87
Staff/SA OR	42	32	772	24	147
Staff/SA Ortho	20	6	76	12	20
Staff/SA SX	6	6	114	19	35
TAES2	0	0	0	0	0
TIPS	16	2	14	7	8

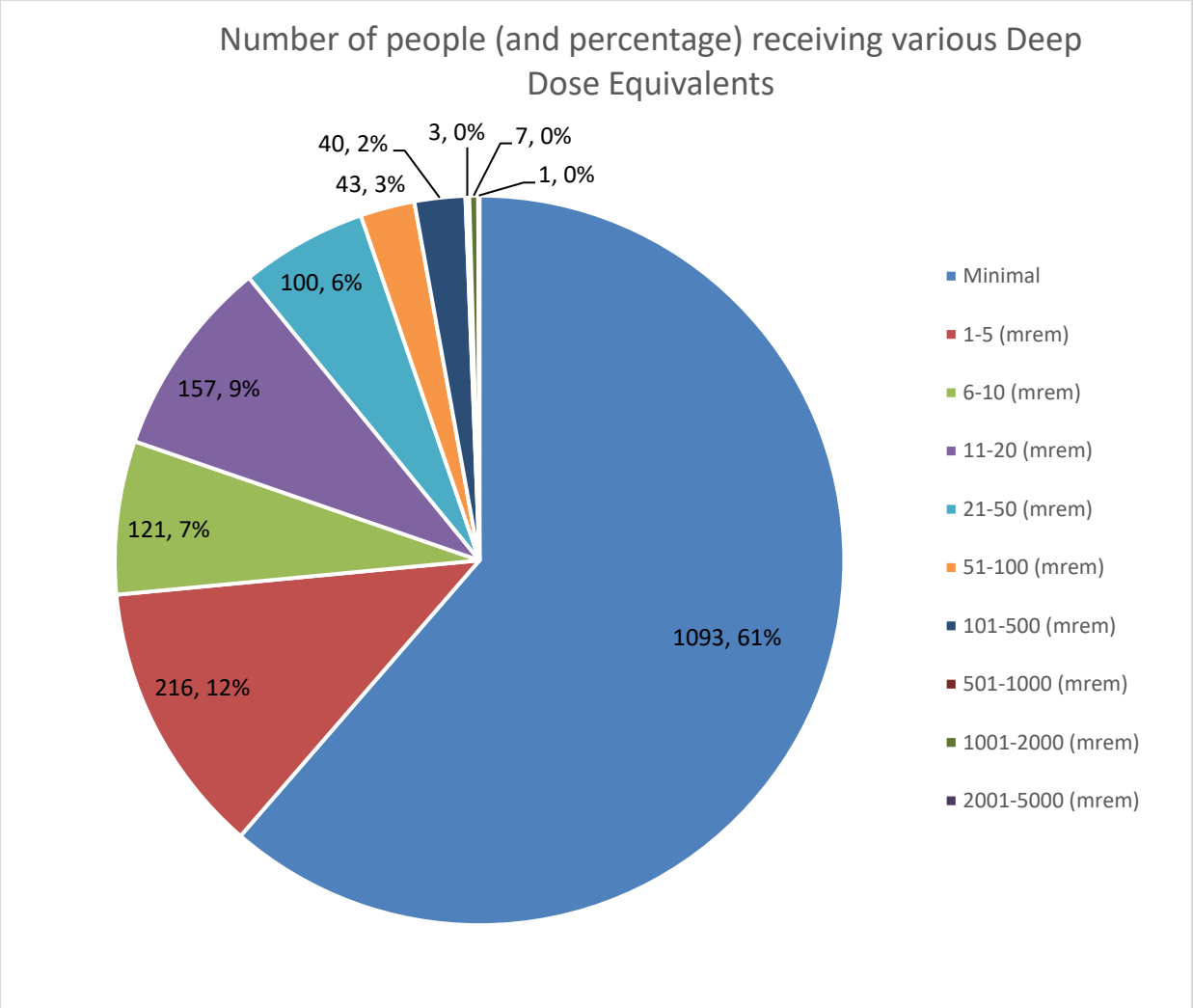

Figure 1 - The number of people receiving various values of whole body deep dose equivalent exposures is shown. "Minimal" indicates no measurable dose above background.

Review of Internal Dosimetry Data

There were 69 routine post-work thyroid screening bioassays performed for I-125. No urine bioassays were performed. No bioassays were performed for I-131. None of the bioassays performed required additional investigation.

Radioactive Waste Disposal

In 2023, one solid waste disposal to the local landfill was conducted via disposal methods allowed under the Texas Administrative Code (TAC), 25 TAC §289.202(fff)(1)(A), 25 TAC §289.202(fff)(1) B, 25 TAC §289.202(fff)(4) and 25 TAC §289.202(ggg)(7).

A landfill disposal consisting of short-lived waste (P-32, S-35, I-125, Tc-99m, F-18, and In-111) and long lived waste (H-3, C-14) was conducted on June 6, 2023. Details of the disposal including weight, volume, and total activity are included in Table 4.

Table 4 - Summary of 2023 Landfill Disposals

Date	Radionuclide	Volume (m^3) or Weight (pounds)	Activity (mCi)
10/06/2023	^{3}H and ^{14}C	213.85 lbs, 2.25 m^3	0.625
	All Other Short Lived including ^{18}F	6.36 m^3	3.067

One liquid waste disposal was conducted in 2023. The total activity of all radionuclides released via the sanitary sewer in 2023 was 2.83 mCi. The total activity concentration for the year was 1.23E-08 μCi mL^{-1}. The sum of the ratios of the radionuclides disposed was 7.62E-05 which is significantly less than 1. All of these values are well below the limits stated in 25 TAC 289.202 (ggg) regarding the discharge of radionuclides via sanitary sewer. Table 5 shows the summary of liquid waste disposals.

Table 5 – Summary of 2023 Liquid Disposals to the Sanitary Sewer

Radionuclide	^{3}H	^{14}C	^{32}P	^{33}P	^{35}S	^{125}I
Yearly Total (mCi)	0.923	1.66	0.00032	0.00	0.00694	0.238
Activity Concentration (µCi/mL)	4.01E-09	7.23E-09	1.40E-12	0.00E-00	3.02E-11	1.03E-09
25TAC289.202(ggg) Table III limits (µCi/mL)	1.00E-02	3.00E-04	9.00E-05	8.00E-04	1.00E-03	2.00E-05
Ratios of Concentration to limits	4.01E-07	2.41E-05	1.55E-08	0.00E-00	3.02E-08	5.17E-05

*Sum of the ratios: 7.62E-05 which is less than 1

Shipment of waste to the Texas low-level waste disposal facility or other disposal sites was conducted through the waste broker Bionomics, Inc. In 2023, there were two waste shipments from Texas A&M University, College Station. Table 6 shows the summary of waste disposed of through Bionomics, Inc which includes the shipment date, number and types of containers, and waste category. The total activity and types of radionuclides in each container is also listed.

Table 6 – Summary of 2023 Waste Disposals through Bionomics

Date	Number	Container	Category	Activity (mCi) and Radionuclides
02/02/2023	1	5 gallon drum	Solid	Total activity = 0.1215 mCi Am-241, Ba-133, Co-60, Cs-137, Eu-152, Ra-226
	1	5 gallon drum	Solid	Total activity = 0.0045 mCi Th-232, U-238
	1	5 gallon drum	Vials	Total activity = 0.0116 mCi H-3, C-14, Cl-36
03/28/2023	1	Pallet	Solid	Total activity = 0.0020 mCi C-14

	1	Plastic Bag	Solid	Total activity = 0.0020 mCi C-14
	1	55 gallon drum	Solid	Total activity = 0.0200 mCi H-3

POLICIES & PROCEDURES

As part of license renewal for L06561, the radioactive material procedure manual was updated. As part of the registration renewal for R00304, the radiation producing device procedure manual was updated.

Annual Radiological Safety Laboratory Reviews

In 2023, a total of 66 radiological safety laboratory reviews/inspections were performed on the TAMU main campus and local sites (RELLIS, Health Science Center, etc.), including 2 neutron moisture gauge user permits. Radiological safety staff also completed inspections of 15 remote site RAM locations, including 6 neutron moisture gauge user permits. Inspections for RPD and lasers under R00304 and Z00116 were performed on a periodic basis when new units were added and/or decommissioned respectively. These reviews were conducted in addition to other visits to the labs such as package delivery, waste pickup, contamination/radiation surveys, and upon request of the PI. laboratories that required follow-up visits by radiological safety staff due to minor discrepancies were completed.

Animal Use Protocols, IRB Protocols, and Compliance Reviews

In 2023, 22 animal use protocols were reviewed for use of radioactive materials, radiation producing devices, and lasers. 12 Institutional Review Board (IRB) human subject study protocols were reviewed. In addition, 26 radioactive material/radiation producing device compliance item protocols and 22 laser compliance item protocols were reviewed.

Radiological Safety Committee Audit

The Radiological Safety Committee performed three audits on radiation safety program key areas, but the third audit was conducted on early part of January 2024 due to schedule conflicts. Table 7 furnishes details of the audits. Overall, there were no deficiencies identified in the topic areas that were audited.

Table 7- Summary of RSC Audits

Audit topic	Date	Performed by	Comments
Radioactive Material Inventory	March 28, 2023	Bryan Tomlin	The auditor was satisfied with the level of attention given to assuring that the electronic RAM inventory records are properly protected against loss. No findings. Recommendations: None
Radiation Producing Device Program	August 9, 2023	Jay Griffin, Joe Reibenspies	EHS is commended for updating the Procedure Manual for the Use of RPDs and migrating to an online database system (ehsa.tamu.edu/ehsa). The auditors recognized a potential weakness in that radiological safety staff is typically made aware of RPD purchases through the purchasing department (system-wide), vendor, or PI. It is conceivable that a PI may purchase or otherwise obtain an RPD from a third-party in which the cost is less than the threshold to involve purchasing. In this case, the PI and/or vendor would be responsible for notifying EHS, but there is not a backup system in place. The auditors did not identify any major programmatic deficiencies and commended the radiation safety staff for their diligent work in maintaining a safe work environment and regulatory compliance in the face of staff shortages.
Sealed Source Leak Test Tracking Records	January 17, 2024	Malcom Delovio, Bryan Tomlin	Overall, the auditors found that the procedures and documentation are in good order.

State Inspections

Table 8 provides summary information from inspections conducted by Texas Department of State Health Services Radiation Control. State inspectors performed an inspection of L00448 and L05683 between the dates of September 7th and 9th at the main College Station campus. A remote site inspection of the Uvalde site was conducted on September 26th. State inspectors performed an inspection of R00304 on September 28th for the main College Station campus and the A&M Reproductive Sciences site. The inspector noted three violations for out of date equipment calibrations. The calibrations were completed in November 2023, and the violations were rescinded.

Table 8 – Summary of 2023 State Inspections

License or Registration	Site Inspected	Date	Discrepancies or Violations
L00448	Site 000-Main site	September 7-9, 2023	The inspector emphasized that the Category-II source could not continue to be stored/used without a specific security plan, despite being secure by benefit of the reactor security requirements and requested that a decision regarding the device be made as soon as possible. Comment: TAMU EHS had a discussion with NESC representative and DSHS and determined to submit an exemption request. On December 7, 2023, Texas A&M University submitted an exemption request from physical protection requirements of Category-II radioactive material listed on License L00448.
L05683	Site -000	September 7, 2023	Inspector stressed on the safety aspects of transportation of gauge No discrepancies, and the program in compliance

	Site-008-Uvalde	September 26, 2023	No discrepancy and the program in compliance
R00304	Site -000 (main site) Site -020 (new site)	September 28, 2023	Notice of violation received: Violation of 25 TAC §289.233(j)(8)(C)(iii)(II)(a): Calibration of the radiation therapy system exceeded the required 12-month interval. The calibration was performed on 05/2022 and has not been performed since. Violation of 25 TAC §289.233(j)(5)(N)(i)): The equipment performance evaluation was not conducted at the required interval, for the following radiation machine(s). Violation of 25 TAC §289.233(j)(8)(C)(iii)(II)(b): Calibration of the radiation therapy system was not performed by a licensed medical physicist with a specialty in therapeutic radiological physics. Comment: All EPE tests were completed in November 2023, letter submitted to DSHS, and violations were rescinded

Radiological Incidents and Events

There were two incidents of individuals receiving unintended exposure from X-Ray sources and one incident of an individual getting contamination on their clothing which required decontamination by radiological safety staff. The three incidents are summarized in Table 9.

Table 9- Summary of Radiological Incidents/Events

Location	Incident details	Comment
Large Animal Radiology – Minor Hand Exposure	The individual was physically positioning and holding a patient for a diagnostic radiology procedure. During the procedure, the patient moved which altered the position of the individual who was holding the patient. Review of the image showed that the individual's hand was within the primary beam.	The individual was wearing lead gloves and dosimetry. Radiological safety staff estimated the dose to the individual's hand to be approximately 1 mrem. Radiological safety staff conducted training with the individuals involved in the incident.
Large Animal Hospital Radiology – Ungloved hand exposure	The individual was physically positioning and holding a patient for a diagnostic radiology procedure. Review of the image showed that the individual's ungloved hand was within the primary beam.	The individual misunderstood the PPE requirements and was under the assumption that lead gloves should be worn only when close to the primary beam. Training was conducted with Large Animal Radiology staff to cover PPE requirements.
Nuclear Medicine GI Lab – Clothing contamination with iodine	Thyroid bioassay performed showed an elevated count measurement approximately 45 hours following an iodination procedure. It was determined to be contamination on the individual's pants worn during the iodination procedure.	Contaminated clothing was removed and stored for decay. Follow up surveys in the GI Lab found small amounts of contamination on reusable lab coats. GI Lab altered their procedures to replace the reusable lab coats with single use, disposable suits. The GI Lab also altered their procedures for personnel contamination surveys

Report Submitted By: Latha Vasudevan Date: July 17, 2024

Radiological Safety Officer
Latha Vasudevan, Ph.D., CHP

Reviewed By: Bryan Tomlin Date: 18-Jul-2024

Chair, Radiological Safety Committee
Bryan Tomlin, Ph.D.