



**Department of State Health Services (DSHS)
Program Report to the Texas Radiation Advisory Board (TRAB)
Consumer Protection Division**

**November 3, 2023
Radiation Section**

Licensing and Registration Activities

| License Type | Companies | Sites |
|---------------------|------------------|--------------|
| X-Ray Registrations | 17780 | 24700 |
| Laser | 3753 | 5039 |

| Registration Completed Actions Mar 2023 - May 2023 | | | | |
|---|-------------|----------------|------------------|--------------------|
| | New | Renewal | Amendment | Termination |
| X-Ray | 994 | 164 | 893 | 611 |
| Laser | 421 | 50 | 120 | 66 |
| Total | 3369 | | | |

| RAM Licensing actions April 1 – June 15, 2023 | | | | |
|--|------------|----------------|------------------|--------------------|
| | New | Renewal | Amendment | Termination |
| General License Acknowledgment | 2 | N/A | 18 | 5 |
| RAM | 9 | 29 | 197 | 9 |
| Waste Shipper/Transporter | 1 | 3 | 0 | N/A |
| RAM Reciprocity | 5 | 6 | 1 | N/A |
| Sealed Source and Device | 0 | 0 | 4 | 5 |

| Industrial Radiographer Certification | |
|--|-----|
| Application for Exam | 402 |
| Trainee Application | 291 |
| Renewal Application | 102 |
| Non-Texas Radiographer | 214 |

Rulemaking

23R011 - Radioactive Materials

Ensuring compatibility with Nuclear Regulatory Commission (NRC) Regulation Action/Amendment Tracking System (RATS)

- NRC RATS ID 2020-1 Due 06/13/23
- NRC RATS ID 2020-3 Due 11/16/23
- NRC RATS ID 2021-1 Due 09/08/24

Revision of 25 TAC 289-

- §289.201 General Provisions for Radioactive Material
- §289.202 Standards for Protection Against Radiation from Radioactive Material
- §289.253 Radiation Safety Requirements for Well Logging Service Operations and Tracer Studies
- §289.255 Radiation Safety Requirements and Licensing and Registration Procedures for Industrial Radiography
- §289.256 Medical and Veterinary Use of Radioactive Material
- §289.257 Packaging and Transportation of Radioactive Material
- §289.258 Licensing and Radiation Safety Requirements for Irradiators.

Progress

- Reviewed by TRAB April 2023.
- DRAFT version posted on the Health and Human Services Commission (HHSC) and DSHS Radiation Control web pages from 6/12/2023 to 6/26/2023.
- We received one comment that did not address the rule change. Some changes to the draft were suggested by staff, and those were incorporated into the rule proposal.
- The rule packet is undergoing significant revision to meet "Plain Language" guidance.
- The rule has been moved to the February 2024 Executive Council meeting schedule and will likely be moved again to the May 2024 schedule.
- Under the February 2024 schedule,
 - the proposed rule will be published for a 31-day public comment from 1/19/24 to 2/20/24.
 - The rule will become effective on 5/22/2024.
- Under the May 2024 schedule
 - Proposed public comment period will be 7/12/24 to 8/12/24
 - The rule will become effective on 11/11/24.

23R012 - Laser

§289.301 Registration and Radiation Safety Requirements for Lasers and Intense-Pulsed Light Devices

- Reviewed by TRAB April 2023.
- DRAFT version posted on the HHSC and DSHS Radiation Control web pages from June 30 to July 14.
- This rule project was moved to the February 2024 Executive Council meeting schedule.
 - The Proposed rule public comment period will be from 1/19/2024 to 2/20/2024.
 - The rule will become effective on 5/22/2024.

23R013 - Accelerators

§289.229 Radiation Safety Requirements for Accelerators, Therapeutic Radiation Machines, Simulators, and Electronic Brachytherapy Devices

- Reviewed by TRAB April 2023.
- DRAFT version posted on the HHSC and DSHS Radiation Control web pages from

6/21/23 to 7/5/23. Comments were incorporated into the Proposed rule language.

- This rule project was moved to the February 2024 Executive Council meeting schedule.
 - The Proposed rule public comment period will be from 1/19/2024 to 2/20/2024.
 - The rule will become effective on 5/22/2024.

23R048 Licensing of RAM

§289.252 Licensing of Radioactive Material

- Addresses NRC RATS 2021-2. Deadline is 12/30/2024
- The project is currently on the May 2024 Executive Council meeting schedule.
 - Draft public comment period will be 1/4/2024 to 1/18/2024
 - The proposed public comment period will be from 6/21/2024 to 7/22/2024
 - The rule will be effective 10/23/2024
- This draft has not been reviewed by TRAB

23R057 TRAB

§289.130 Radiation Advisory Boards

- SB 1592 (88R) passed to increase the Texas Radiation Advisory Board membership to 19 members, adding a requirement for a member to be licensed by the Texas Veterinary Board.
- Significant revision was made to harmonize §289.130 with the advisory board rule template provided by the Rule Coordination Office.
- This rule project is on the May 2024 Executive Council meeting schedule.
 - Draft public comment period will be 1/4/2024 to 1/18/2024
 - The proposed public comment period will be 7/12/2024 to 8/12/2024
 - The rule will be effective 11/11/2024
- This draft is being reviewed by TRAB.

Inspection Data (FY23 to date)

| Number of Inspections per Fiscal Quarter in FY23 | | | | |
|--|---------------------------|-----------|---------------------------|---------------------|
| | QRT 1 (9/1/22 – 11/30/22) | | QRT 2 (12/1/22 – 2/28/23) | |
| | # Ins | # Fail | # Ins | # Fail ¹ |
| RAM ² | 253 | 30 (12%) | 288 | 25 (9%) |
| X-Ray | 1181 | 449 (38%) | 1145 | 402 (35%) |
| X-Ray Remote | 164 | 91 (55%) | 213 | 109 (51%) |
| Mammography | 158 | 9 (6%) | 156 | 30 (19%) |
| Laser | 12 | 9 (75%) | 3 | 3 (100%) |
| | QRT 3 (3/1/23 – 5/31/23) | | QRT 4 (6/1/23 – 8/31/23) | |
| | # Ins | # Fail | # Ins | # Fail |
| RAM | 303 | 52 (17%) | 235 | 32 (14%) |
| X-Ray | 1225 | 384 (31%) | 1239 | 471 (38%) |
| X-Ray Remote | 145 | 60 (41%) | 214 | 70 (33%) |
| Mammography | 149 | 27 (18%) | 178 | 29 (16%) |
| Laser | 20 | 16 (80%) | 12 | 11 (92%) |
| ¹ Inspection results can be Pass, Fail, N/A, or Unknown | | | | |
| ² “RAM” includes inspections of radioactive material licenses, general licenses, industrial radiography, and reciprocity approvals. | | | | |

Technical Staff Vacancies

| Position | Location | Anticipated Fill Date | Notes |
|------------------------------------|-----------------|------------------------------|---|
| Mammography Inspector | El Paso | June 2024 | Will begin (Food & Drug Administration (FDA) training in January 2024 |
| Mammography Inspector | Statewide | June 2024 | Filled. The inspector will begin FDA training in January 2024 |
| X-ray/Mammography Inspector | Amarillo | June 2023 | To be posted |
| Mammography Accreditation Reviewer | Statewide | November 2024 | Currently Interviewing |
| X-ray Inspector | Tyler | November 2023 | Hiring in Progress |
| X-ray Inspector | Arlington | TBD | Position posted, interviewing in progress |
| X-ray Inspector | Beaumont | TBD | To be posted |
| RAM Inspector | Austin | October 12, 2023 | Position Filled |
| RAM Inspector | Houston | November 2023 | Performing Interviews |
| Ram Inspector | Arlington | December 2023 | Currently Posted |
| RAM License Reviewer | Austin | TBD | Currently Posted |
| RAM License Reviewer | Austin | TBD | Currently Posted |
| Registration Reviewer | Statewide | November 1, 2023 | Hiring in process |

Staff Training

- Four Radioactive Materials (RAM) license reviewers attended the virtual (Nuclear Regulatory Commission) NRC Sealed Source and Device Workshop.
- One RAM license reviewer attended the NRC Irradiator Technology Course.
- One RAM license reviewer attended the virtual NRC Root Cause Course.
- Two RAM inspectors attended the NRC Material Controls Course.

Compliance Activities

July 2023 to September 2023:

- Orders: 117
- Administrative Penalties: \$361,256.00
- Revocations:
 - 7 X-ray registrations
 - 0 Radioactive Material licenses

Radioactive Materials Inspection Branch

- Eric Skotak, a Department of Energy's (DOE's) Transportation Security Unified Stakeholder's Group member, attended the annual conference in Irvine, California. This group is currently focusing on developing strategies and resources regarding the transport security of category 1 and 2 radioactive materials. The group is currently focusing on training, regulation, and cybersecurity.

Mammography Branch

- No updates.

Registration Branch

- The Registration Branch continues to add additional applications to the Versa Online Services system to allow existing registrants to amend their Certificates of X-ray and Laser Registration. The Branch currently has Equipment, Address, Radiation Safety Officer/Laser Safety Officer (RSO/LSO), and name change application requests online.
- The Agency is transitioning to a new documents management system in October. This will significantly impact the Branch workflow as the Branch handles the majority of the documents for X-ray and Laser program activities.
- Christine Retherford was selected as the Medical Program Reviewer, effective July 2023.
- Jackie Pursley was selected as the Environmental Protection Specialist III for the Laser/Industrial Program, effective September 2023.

Emergency Response Activities

South Texas Project Nuclear Power Plant (STP)

- August 2, 2023: 14 staff members participated in a combined functional drill.
- August 31, 2023: Federal Emergency Management Agency (FEMA) evaluated Matagorda Regional Medical Center and Matagorda County Emergency Medical Services during a medical services drill. There were no findings.

Comanche Peak Nuclear Power Plant (CPNPP)

- July 26, 2023: Comanche Peak Dress Graded Exercise was performed. There were 44 individuals from our Radiological Emergency Response Team. There was a level 2 finding at Somervell County, which was redemonstrated and corrected on the day of the exercise.
- August 23, 2023: 2 staff members participated in the MS-1 graded exercise. Texas Health Harris Methodist Hospital Cleburne and Somervell County Fire Department were evaluated. There were no findings.
- September 12, 2023: 2 staff members participated in the dress rehearsal at Benbrook Reception Center. The graded exercise is scheduled for October 12, 2023.

Waste Isolation Pilot Plant (WIPP)

- WIPP has continued to have quarterly meetings.
- There have been (10) WIPP shipments through the State of Texas.
- Meter exchanges and calibrations have occurred since the last report.
- Meetings with DSHS, Technical Resources Group/Transportation Emergency Preparedness Program (TRG/TEPP), Texas Division of Emergency Management (TDEM), State Energy Conservation Office (SECO), and Reeves County EMC for WIPP Transportation Exercise (WIPPTREX) planning have been conducted since the last report.
- WIPPTREX is scheduled for October 24th in Reeves County.
- Approximately (76) students have been trained in Reeves and Ector County since the last report.

- Technician Modular Emergency Response Radiological Transportation Training (TMERRTT) is scheduled for October 22nd, 2023, in Odessa, TX.
- The vacancy for the WIPP Coordinator position has been posted since the last report.

Pantex/Agreement in Principle (AIP)

- A quarterly AIP task III meeting was attended by DSHS staff in August 2023.
- Monthly local AIP meetings were attended by DSHS staff in July and September of 2023. There was no August meeting.
- Lisa Bruedigan, Tim Gibson, and Shay Christian traveled to Oak Ridge, Tennessee, to the Department of Energy (DOE) Y-12 Plant to observe their annual emergency response exercise. Tours of the plant included the emergency operations center, various plant operation buildings, and the Y-12 fire service were also visited. Also toured the Oak Ridge National Labs facility. During the exercise, we had people in the emergency operations center, the Tennessee Emergency Management Agency emergency operation center, and later at the joint information center. It was a great experience with much useful knowledge obtained.
- Tim Gibson and Shay Christian attended the Panhandle Regional Emergency Preparedness Conference in Amarillo on September 21, 2023.
- Quarterly environmental sampling was performed on July 12, 2023; soil/sediment, vegetation, surface water, and drinking water were obtained and sent to the DSHS Lab for analysis. OSLs (Optically stimulated luminescence dosimeters) were exchanged at the sampling locations on and around the Pantex plant. The samples were sent to the DSHS Lab for analysis. These results are pending.
- Lead brick shielding was added to the calibration source locker at the Washburn Staging Area. This will effectively bring the dose to the public levels to within regulatory levels.
- Calibrations were performed by Amarillo DSHS personnel over several periods in August 2023. 6 Canberra meters were calibrated for Carson County, the City of Amarillo had 3 Ludlum 3001, 8 Canberra, and 6 Ludlum 26-2 meters calibrated, DSHS Washburn Staging Area had 2 Ludlum 2241 meters, and 3 Eberline PG-2 probes calibrated.
- Tim Gibson participated in the Comanche Peak Nuclear Power Plant graded exercise on July 26, 2023.

Radiological Operational Support Specialists (ROSS)

- In September 2023, one DSHS staff member was certified as a ROSS Type 3. The Texas ROSS program received recognition at the National Quarterly ROSS Meeting for successfully certifying four individuals in their ROSS qualifications.

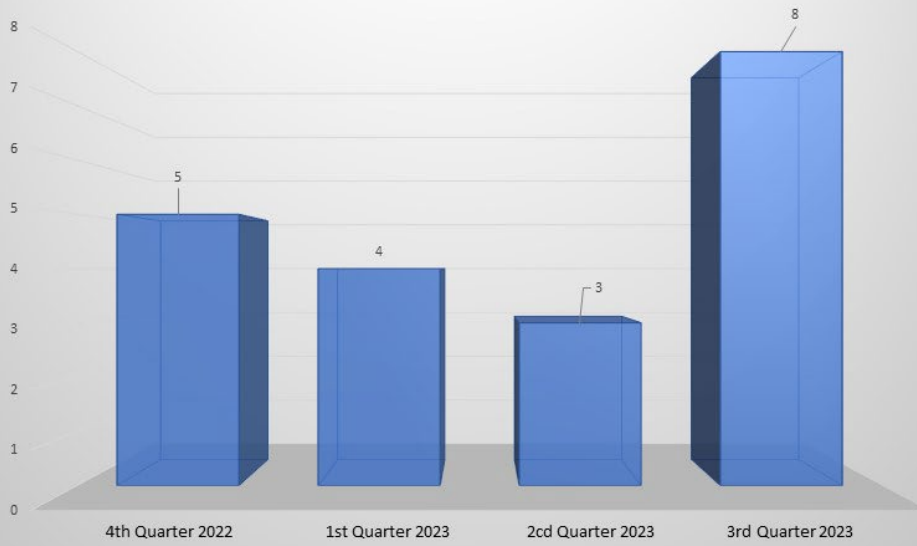
Staff Activities

No activities for this period.

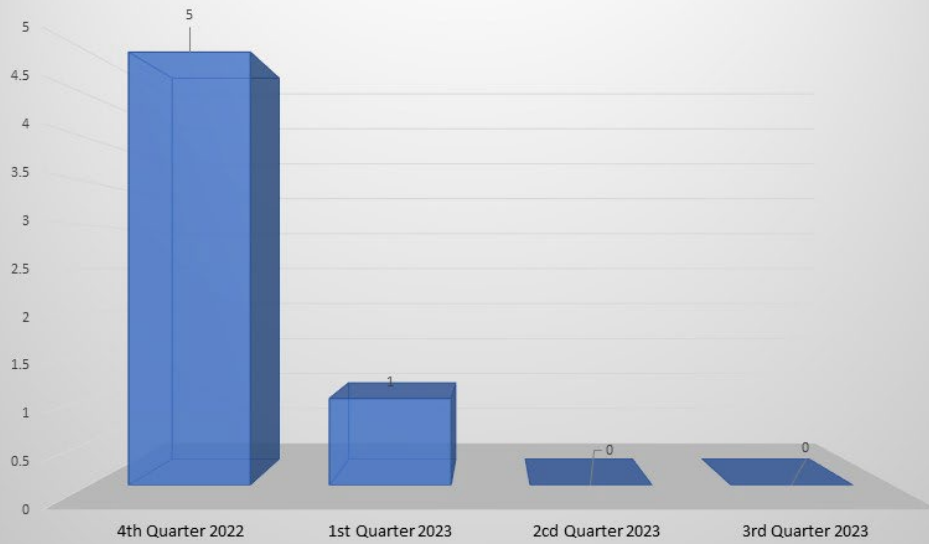
Incident Investigations

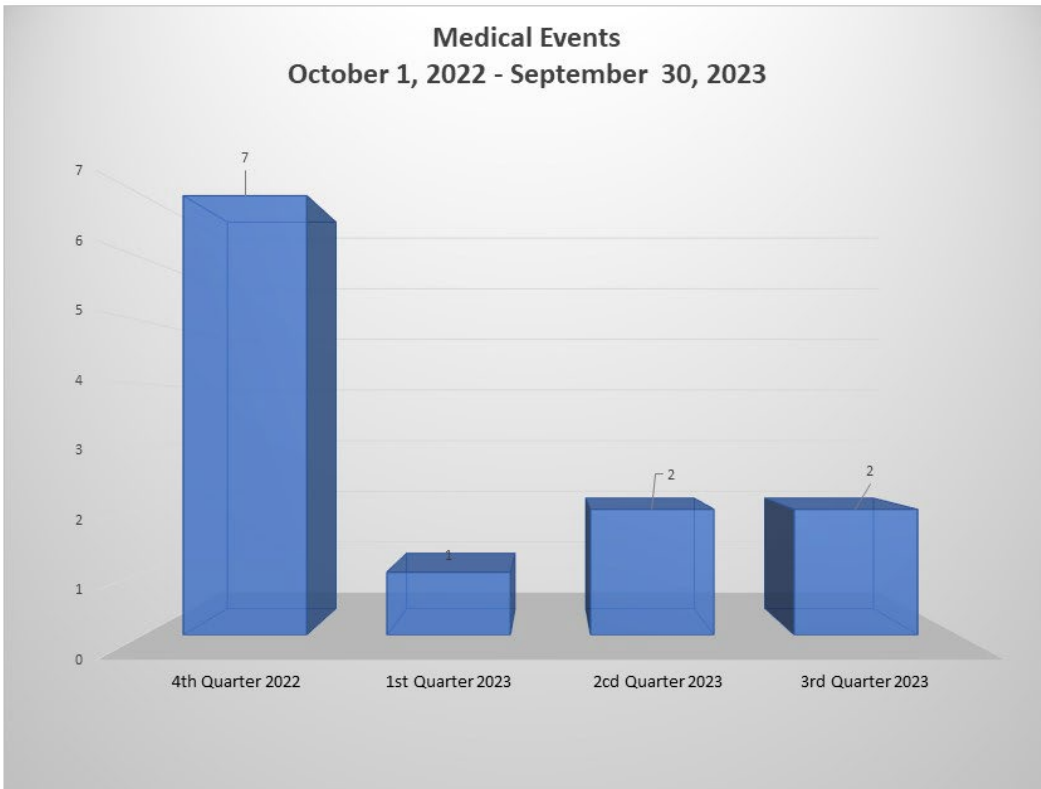
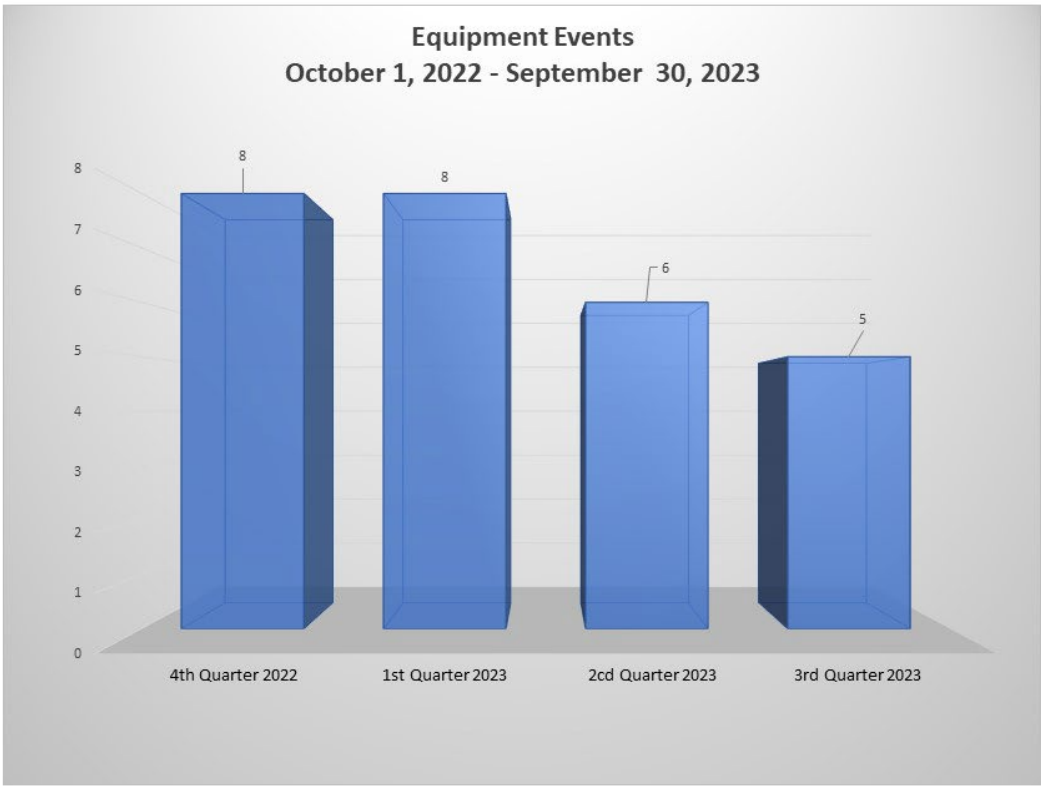
The graphs below reflect the numbers and categories of incidents received during this reporting period.

Lost/Stolen/Missing RAM October 1, 2022 - September 30, 2023



Exposure Events October 1, 2022 - September 30, 2023





Medical Event Summaries:

I - 10017 - Medical Event - Houston, Texas

On May 9, 2023, the licensee notified the Agency that a medical event occurred at its facility earlier that day. The licensee stated a patient was prescribed two doses of SIR-Spheres yttrium-90 (Y-90). After the procedure, it was determined that the patient received doses different from the prescribed doses by more than 20%. The patient was prescribed doses of 14.5 mCi and 21.7 mCi. The patient received 5.3 mCi (for the syringe dose of 14.2 mCi) and 12.31 mCi (for the syringe dose of 21.5 mCi). Delivered doses differed by 37.3% and 57.2%, respectively. The licensee returned the equipment to the manufacturer for inspection. On August 25, 2023, the Agency received the manufacturer's report. It stated they did not find any microspheres in the returned equipment and that the system functioned normally. Additional information was requested from the licensee. On October 4, 2023, the licensee reported its investigation found that a leak had occurred between the delivery system and the patient's delivery catheter. The licensee reported that to prevent the event's recurrence, they have purchased new equipment, changed its procedure, and will provide additional training to its employees who use this system.

I-10020 - Unplanned Medical Treatment of Contaminated Person - Houston, Texas

On May 18, 2023, the Department was notified of a medical radiologic technologist whose hands were contaminated. The technologist was pregnant and after repeated washing still had around 5,500 cpm around the left thumb while the rest of her hands were below 2,000 cpm. Contamination was also found on a nuclear medicine package in the hot room of a hospital. The package had been received earlier from a nuclear medicine pharmacy. The hospital and the pharmacy searched for additional contamination but found none. Both facilities had detectors that could measure down to the background.

I-10034 - Medical Event - El Paso, TX

On July 6, 2023, the licensee notified the Agency of a medical event that occurred at their facility on July 5, 2023. A patient was to be given 9 mCi of PSMA with fluorine-18 and was instead given 12 mCi of FDG with fluorine-18. The CT\PET tech failed to follow the time-out procedure. The effect on the patient was negligible, he received 875 mRem from the F-18 and 525 mRem from the CT for a total dose of 1.4 Rem. The entire radiation staff will attend training to be made aware of the incident, and the importance of following procedures and focusing on clearing the treatment vaults will be emphasized.

I - 10043 - Medical Administration Error - Pearland, Texas

On August 8, 2023, the licensee notified the Agency that a medical event had occurred at its facility. The event occurred when a patient was injected with a total of 1.01 millicuries of technetium 99m - Sulfur Colloid (unfiltered) to their breast and was not prescribed to receive any radiopharmaceuticals. The licensee does not believe the patient will experience any adverse effects due to the error. The patient and their physician were notified of the error. A review of the package insert for this radiopharmaceutical shows that no exposure limit was exceeded, and the event did not meet the criteria of a reportable event.