TEXAS Health and Human Services | Texas Department of State Health Services

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

January 19, 2024
Radiation Section

Licensing and Registration Activities

License Type	Companies	Sites
X-Ray Registrations	17970	22870
Laser	3852	4570

Registration Completed Actions September 2023 - November 2023				
	New	Renewal	Amendment	Termination
X-Ray	830	122	974	611
Laser	364	24	136	78
Total 3088				

RAM Licensing actions September 2023 – November 2023				
	New	Renewal	Amendment	Termination
General License Acknowledgment	0	0	1	0
RAM	8	36	234	12
Waste Shipper/Transporter	1	8	0	0
RAM Reciprocity	2	5	2	0
Sealed Source and Device	0	0	6	0

Industrial Radiographer Certification	
Application for Exam	342
Trainee Application	397
Renewal Application	114
Non-Texas Radiographer	332

Rulemaking

23R011 - Radioactive Materials

Ensuring compatibility with Nuclear Regulatory Commission Regulation Action/Amendment Tracking System

- 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 sections in this project-

- §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.
- The rule packet was significantly revised to meet "Plain Language" guidance.
- The rule has been moved to the May 2024 Executive Council meeting schedule.
- Under the May 2024 schedule,
    - The proposed rule will be published for a 31-day public comment from 6/21/24 to 7/22/24.
    - The rule will become effective on 10/23/2024.

<u>23R012 - Laser</u>

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

- Reviewed by TRAB April 2023.
- This rule project was moved to the August 2024 Executive Council meeting schedule.
    - The Proposed rule public comment period will be from 9/20/2024 to 10/21/2024.
    - The rule will become effective on 1/28/2025.

<u>23R013 - Accelerators</u>

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

- Reviewed by TRAB April 2023.
- This rule project was moved to the May 2024 Executive Council meeting schedule.
    - The Proposed rule public comment period will be from 6/21/2024 to 7/22/2024.
    - The rule will become effective on 10/23/2024.

<u>23R048 Licensing of RAM</u>

§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.
    - The 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.

<u>23R057 Texas Radiation Advisory Board (TRAB)</u>

§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 November 2024 Executive Council meeting schedule.
  - The draft public comment period will be 6/5/2024 to 7/22/2024.
  - The proposed public comment period will be 12/27/2024 to 1/27/2025.
  - The rule will be effective 4/28/2025.
- TRAB is reviewing this draft.

Inspection Data (FY23 to date)

Number of Inspections for FY23 total and 1st QTR for FY24				
	FY23 (9/1/22 – 8/31/23)		FY 24 QTR 1 (9/1/23 – 11/30/23)	
	# Ins	# Insp with Violations	# Ins	# Insp with Violations
RAM	755	94 (13.1%)	181	25 (14.2%)
X-Ray	4789	1693 (35.4%)	963	394 (41%)
X-Ray Remote	732	352 (65.1%)	123	33 (60%)
Mammography	641	120 (18.7%)	161	30 (18.6%)
Laser	47	39 (83%)	4	4 (100%)

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	December 2023	Filled December 1, 2023
X-ray Inspector	Austin	February 2024	To be posted
X-ray Inspector	Arlington	TBD	Position posted, interview selection in progress
X-ray Inspector	San Antonio	TBD	To be posted
X-ray Remote Inspector	Remote	TBD	Interview selection in process
RAM Inspector	Houston	November 12, 2023	Position Filled
RAM Inspector	Arlington	January 1, 2024	Hiring in Process
Ram Inspector	Lubbock/Midland	February 2024	To be 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

- One RAM inspector attended the virtual NRC Root Cause/Incident Investigation Workshop

Compliance Activities

October 2023 to December 2023:

- Orders: 98
- Administrative Penalties: $173,225.00
- Revocations:
    - 15 X-ray registrations
    - 4 Laser registrations
    - 1 Radioactive Material licenses

Radioactive Materials Inspection Branch

- Our current staffing includes seven fully qualified inspectors, four trained inspectors, and two vacant inspector positions. With such a large proportion of positions in training, our Trainer (a new position that was filled last April) and our fully qualified inspectors have been very busy providing the training required by our Inspector Qualification Program. The training period to become a fully qualified inspector is between 1 and 1½ years. When involved in training new inspectors, the number of inspections our fully qualified inspectors can perform is reduced. With our turnover rate of 30% for each of the last three years, the number of inspections our branch can perform has been reduced by around 40%.

Mammography Branch

- Two inspectors have begun the three-phase Federal Drug Administration MQSA certification process. The following five months will consist of multiple inspection accompaniments, online classroom training, and an on-site classroom course in Maryland in April. The anticipated date of completion is June 2024.

Registration Branch

- The agency transitioned to Hyland OnBase for document management. This impacted the permanent record storage of program documents.
- Melissa Luelling was hired to fill the Medical Registration program reviewer role and is working through the training process.

Emergency Response Activities

South Texas Project Nuclear Power Plant (STP)

- October 11, 2023: 1 staff member participated in STP's environmental sampling drill.
- November 28, 2023: STP held Media Day, and 2 DSHS staff members attended.
- There are no graded exercises currently scheduled for the remainder of 2023. The next graded exercise is a plume pathway exercise scheduled for July 17, 2024, with the dress rehearsal scheduled for June 5, 2024. Approximately 50

Radiological Emergency Response Team members will participate in this exercise. The initial planning meeting is scheduled for January 17, 2024.

Comanche Peak Nuclear Power Plant (CPNPP)

- September 12, 2023: 2 staff members participated in the Benbrook Reception Center drill and training.
- October 12, 2023: 4 staff members participated in the FEMA evaluated exercise at the Benbrook Reception Center. There were no findings.
- There are no graded exercises currently scheduled for the remainder of 2023. There is one MS-1 drill in 2024; the date will be determined.

Waste Isolation Pilot Plant (WIPP)

- WIPP will continue quarterly meetings and offer training, briefings, and equipment exchanges.
- There have been (16) WIPP shipments through Texas.
- Meter exchanges and calibrations have occurred since the last report.
- Meetings with DSHS, TRG/TEPP, TDEM, SECO, and Reeves County EMC for WIPPTREX planning have been conducted since the last report.
- WIPPTREX took place on October 24, 2023, in Reeves County. Approximately 150 participants and 17 local, state, and federal agency representatives. Approximately 158 responders and local officials have been trained in preparations for the WIPPTREX.
- The After-Action Report draft report was submitted on November 17th, 2023. The After-Action Meeting took place on December 6th, 2023. The finalized AAR report will be submitted on December 21st, 2023.
- Approximately 89 students have been trained in Reeves and Ector County since the last report.
- Local official briefings have been scheduled for January 22nd and January 23rd, 2024.
- Forrest Weston has filled the vacancy for the WIPP Coordinator position since the last report. WIPP staff is currently transitioning until the new coordinator successfully assimilates into the new role.
- WIPP staff attended the SSEB joint meeting in Louisville, Kentucky, from December 12-15th, 2023. Raven Alexander presented a presentation on the Reeves County WIPPTREX held on October 24, 2023.

Pantex/Agreement in Principle (AIP)

- A quarterly AIP task III meeting was attended by DSHS staff Lisa Bruedigan and Shay Christian in November 2023.
- Tim Gibson and Shay Christian attended an annual AIP task II (environmental) meeting on December 5, 2023. The meeting was held virtually.
- Monthly local AIP meetings were attended by DSHS staff in October and December of 2023. There was no November meeting.
- The following courses were attended by Tim Gibson and Shay Christian October-December 2023:
    - CTOS-PER 345-Radiation Instruments Operations
    - CTOS-PER 354-Response to Radiological/Nuclear WMD Incidents
    - CTOS-PER 355-Radiation Instruments Employment
    - Technician Level Modular Emergency Response Radiological Transportation (TMERRT) Training
    - REAC/TS-Health Physics for Radiation Emergencies
    - TEEX-sUAS for Public Safety Personnel
    - NACCHO Webinar on Tennessee Radiological Emergency Response
- Quarterly environmental sampling was performed on October 10, 2023;

soil/sediment, vegetation, surface water, and drinking water were obtained and sent to the DSHS Lab for analysis. OSLs 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.

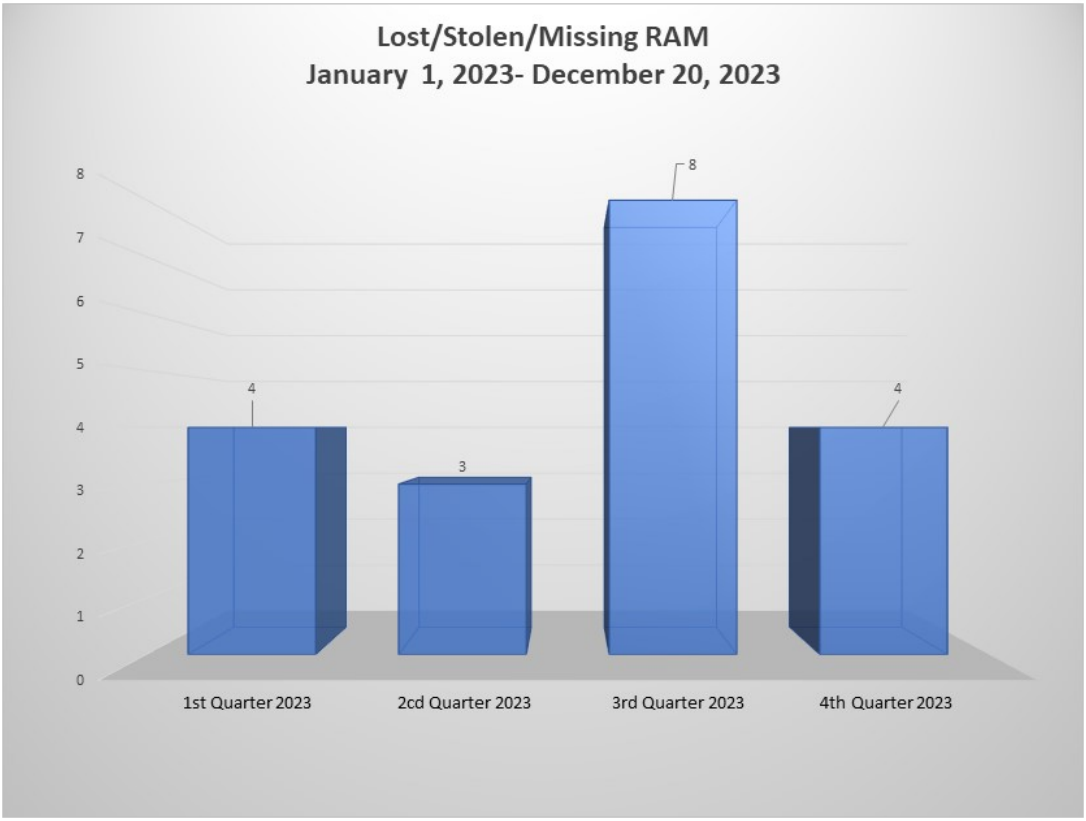
- A Pantex Plant onsite exercise was supported by DSHS personnel on November 8, 2023. During the exercise, Lisa Bruedigan and Shay Christian were in the plant's emergency operation center.
- A tabletop exercise to evaluate emergency response to a Pantex radiological event with offsite consequences was conducted on October 11, 2023. Shay Christian, Tim Gibson, and Whitney Davis participated in this exercise.
- A tabletop exercise to evaluate the City of Amarillo's Community Reception Center was conducted on November 1, 2023. Shay Christian and Tim Gibson participated in this exercise.
- A WIPP exercise was held in Pecos, Texas, on October 24, 2023. Tim Gibson and Shay Christian served as evaluators for this exercise.
- Calibrations were performed by Amarillo DSHS personnel in December 2023. The City of Amarillo had 2 Ludlum 3001 and 5 26-2 meters calibrated. DSHS Washburn Staging Area had 7 Ludlum 2241 meters calibrated.
- Shay Christian passed her FAA Part 107 Remote Pilot exam in December 2023. She is now a Certified Remote Pilot.

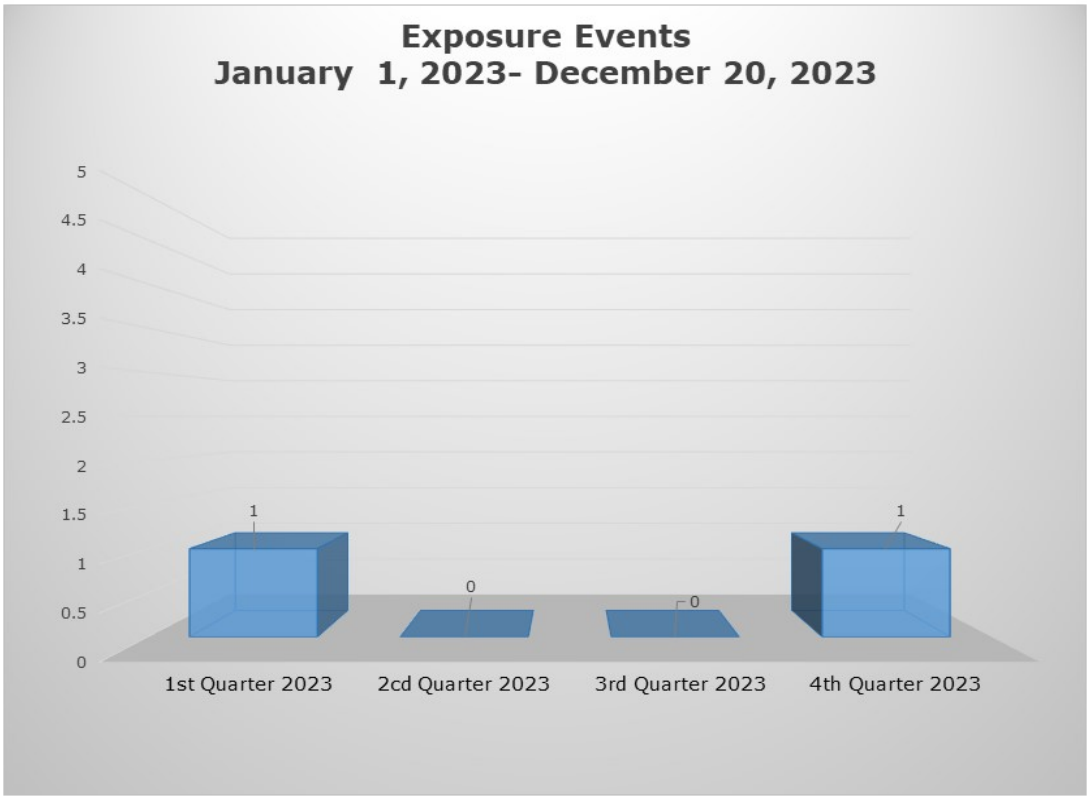
Staff Activities

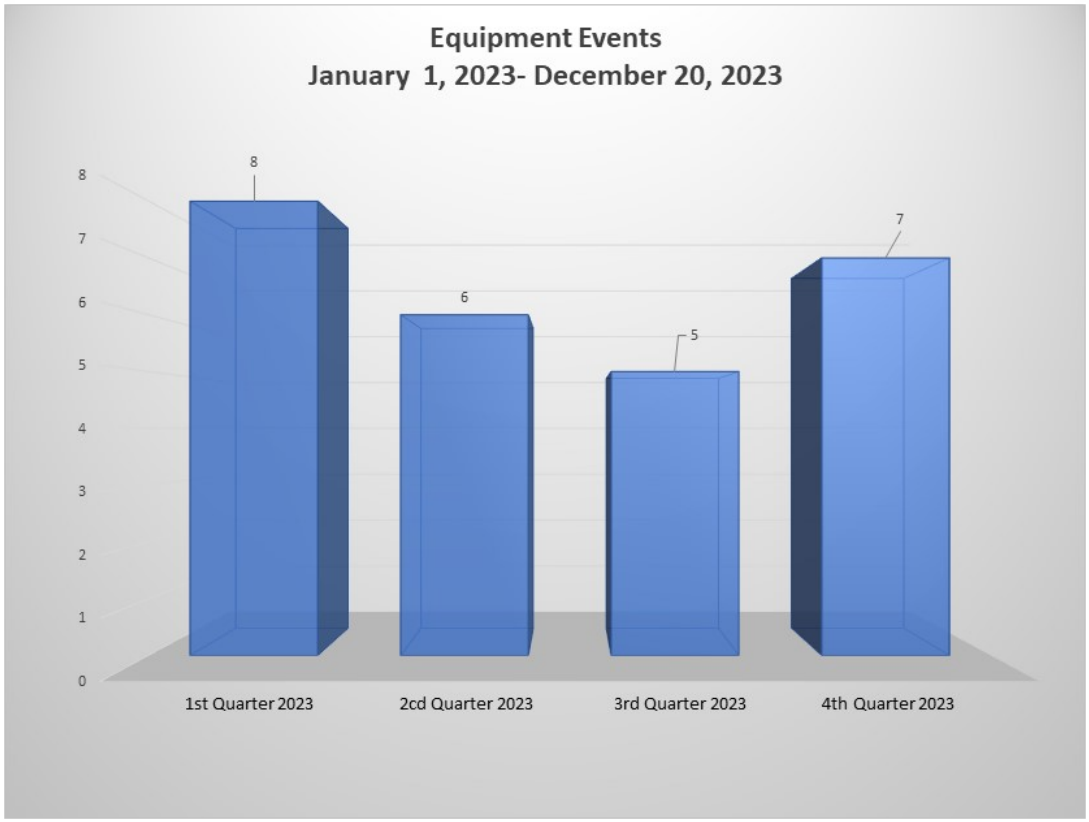
No activities for this period.

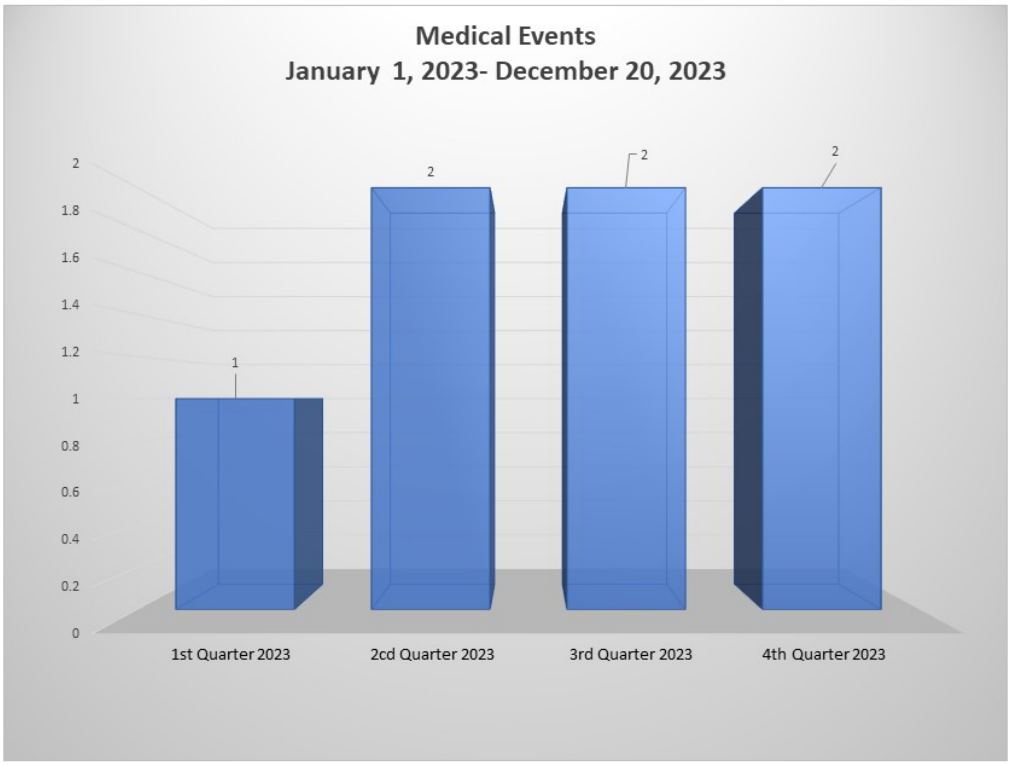
Incident Investigations

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




Exposure Events
January 1, 2023- December 20, 2023
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
1
0
0
1
1st Quarter 2023
2cd Quarter 2023
3rd Quarter 2023
4th Quarter 2023


Equipment Events
January 1, 2023- December 20, 2023
8
7
6
5
4
3
2
1
0
8
6
5
7
1st Quarter 2023
2cd Quarter 2023
3rd Quarter 2023
4th Quarter 2023



Medical Event Summaries:

I - 10061 - Medical Event - Beaumont, Texas

On October 26, 2023, the registrant's radiation safety officer notified the department that a medical event had occurred. The RSO stated that two patients were in the waiting room for treatments on their prostates. Patient A's prostate plan, prescribing 180 cGy daily, was open on the treatment console. Therapist 1 treated patient B instead, who was receiving radiation to the prostate bed, also at 180 cGy daily (patient B is the patient who was affected in this incident). Therapist 1 asked patient B his name and DOB as they were entering the linear accelerator vault. Therapist 2 was in the vault setting up for patient A's treatment. When Therapist 1 entered the vault with Patient B, Therapist 2 notified Therapist 1 that the plans for Patient A, shown on the in-room monitor, were still open. Therapist 1 responded that she would close Patient A's plan and open Patient B's plan. Therapist 1 then walked out of the vault to the treatment console. Therapist 1 then proceeded with CBCT imaging and treatment with Patient A's plan on Patient B. One of two arcs was delivered. During the second arc, Therapist 1 recognized that the incorrect patient's plan was open, and thus, the incorrect treatment, 119.9 cGy at that point, had been delivered. Therapist 1 stopped the treatment and called the chief therapist to the treatment console. The chief therapist subsequently called the physicist to the treatment console, physician, and dosimetrist. Patient B was then taken off the treatment table and put in an exam room to speak to the physician. The physician disclosed the treatment error to the patient immediately. The licensee reported that the patient would not experience any adverse effects from the error. The registrant has improved its time-out procedure, minimized the distractions in the treatment area, and provided additional training for the operators. No violations were cited.

I - 10068 - Therapy Event - San Antonio, Texas

On November 21, 2023, the registrant reported that during the afternoon of November 20, 2023, it had discovered during a review of a therapy that had taken

place that morning that the patient had been administered a dose of 6 gray to the wrong treatment site. The treatment was to be delivered to T6 of the spine. The patient was positioned for the treatment by the technician. The device moved the patient 1.3 centimeters to a new location. The technician notified the physician, who came and looked at the setup. The physician decided the tumor must have grown since the treatment plan was developed, causing the treatment site to change. The physician decided that the treatment should proceed. The registrant stated that the patient would experience no adverse effects. The registrant has changed its procedure and trained all its personnel on the changes. No violations were cited.

List of Acronyms

AAM	After-Action Meeting
AAR	After-Action Report
AIP	Agreement in Principle
cGy	Centigray
CPNPP	Comanche Peak Nuclear Power Plant
CTOS	Counterterrorism Operations Support
DSHS	Department of State Health Services
EMC	Emergency Management Center
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
MQSA	Mammography Quality Standards Act
NACCHO	National Association of County and City Health Officials
NRC	Nuclear Regulatory Commission
OSL	Optically Stimulated Luminescence
RAM	Radioactive Material
RATS	Regulation Action/Amendment Tracking System
REAC/TS	Radiation Emergency Assistance Center/Training Site
RSO	Radiation Safety Officer
SECO	State Energy Conservation Office
SSEB	Southern States Energy Board
STP	South Texas Project Nuclear Power Plant
TDEM	Texas Department of Emergency Management
TEEZ-sUAS	Texas A&M Engineering Extension Service – Small Unmanned Aerial Systems (Drones)
TMERRT	Technician Level Modular Emergency Response Radiological Transportation Training
TRAB	Texas Radiation Advisory Board

TRG/TEPP	Technical Resources Group/Transportation Emergency Preparedness Program
WIPP	Waste Isolation Pilot Plant
WIPPTREX	Waste Isolation Pilot Plant Transportation Exercise