



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

**September 16, 2022
Radiation Section**

Licensing and Registration Activities

License Type	Companies	Sites
General License Acknowledgement	230	273
Radioactive Material	1,300	2,133
X-Ray Registrations	17,762	22,437
Laser	3,552	4,233

Rulemaking

The program continues with internal meetings on the following rules in preparation for upcoming rulemaking:

Radioactive Materials (ensuring compatibility with NRC RATS)

- §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.

X-ray

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

Laser

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

Technical Staff Vacancies

Position	Location	Anticipated Fill Date	Notes
Mammography Inspector	El Paso	June 2024	Wait to train the new X-ray Inspector
Mammography Inspector	Arlington	June 2023	Training current X-ray Inspector
X-ray Inspector	El Paso	September 2022	
X-ray Inspector	Tyler	December 2022	
X-ray Inspector / Trainer	Statewide	October 2022	
X-ray QA Reviewer	Austin	September 2022	
RAM Inspector	Arlington	Perpetual postings	Two vacancies
RAM Inspector / Trainer	Austin	October 2022	
RAM License Reviewer	Austin	October 2022	
Incident Investigator	Statewide	October 2022	

Staff Training

- The Region 11 Mammography Inspector has completed the MQSA requirements and is fully certified to perform independent MQSA inspections.
- Two licensing staff members attended NRC-sponsored training during this reporting period.

Compliance Activities

May 2022 to July 2022:

- Compliance Orders: 198
- Administrative Penalties: \$389,765.00
- Revocations:
 - 30 X-ray registrations
 - 5 Laser registrations
 - 2 Radioactive Material licenses

Emergency Response Activities

South Texas Project Nuclear Power Plant

- July 20, 2022, Evaluated Exercise with 35 staff members participating. FEMA's preliminary evaluation of each offsite response organization has indicated no planning issues or findings from the exercise.
- September 15, 2022, Palacios Reception Center Drill

Comanche Peak Nuclear Power Plant

- July 27, 2022, Evaluated Exercise was postponed due to wildfires within the 10-mile emergency planning zone around Comanche Peak. No offsite

response capabilities were impacted; however, the decision to delay the exercise was made to provide some relief to local response organizations combating the wildfires in the area.

- September 21, 2022, Rescheduled Evaluated Exercise

Arkansas Nuclear One power plant exercise

Two staff members attended the exercise and served as controllers as part of the Southern Mutual Radiological Assistance Program.

Waste Isolation Pilot Plant (WIPP)

- Shipments to WIPP have restarted after a temporary halt due to WIPP operational activities.
- June 20, 2022, WIPP roadshow in Fort Worth.
- WIPP training to local officials in Gregg, Smith, Tarrant, and Van Zandt counties.

Pantex

Pantex has completed the new Joint Information Center/Alternate Emergency Operations Center building space in Amarillo and plans to exercise some aspects of the space during a small regional exercise in November.

Emergency Preparedness and Response

July 11-13, 2022, staff assisted the National Association of State Boating Law Administrators (NASBLA) with training for the Harris County Sheriff's office and Houston Police Department for their Small Vessel Radiation Nuclear Detection (SVRND) Class.

Mobile Source Security

DSHS worked with the Department of Energy Office of Radiological Security (ORS), Texas Department of Public Safety, and several licensees to create a Mobile Radiation Source Security video for local law enforcement and 911 operator training. [Video Link](#)

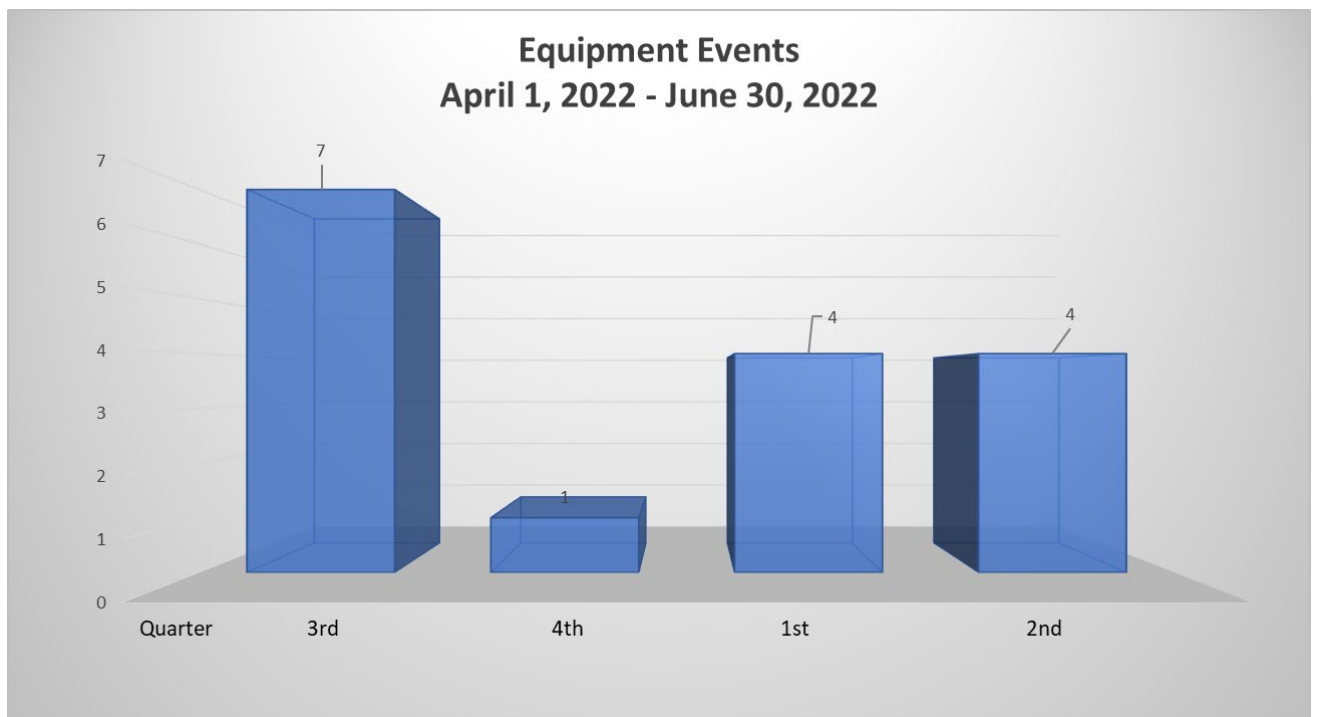
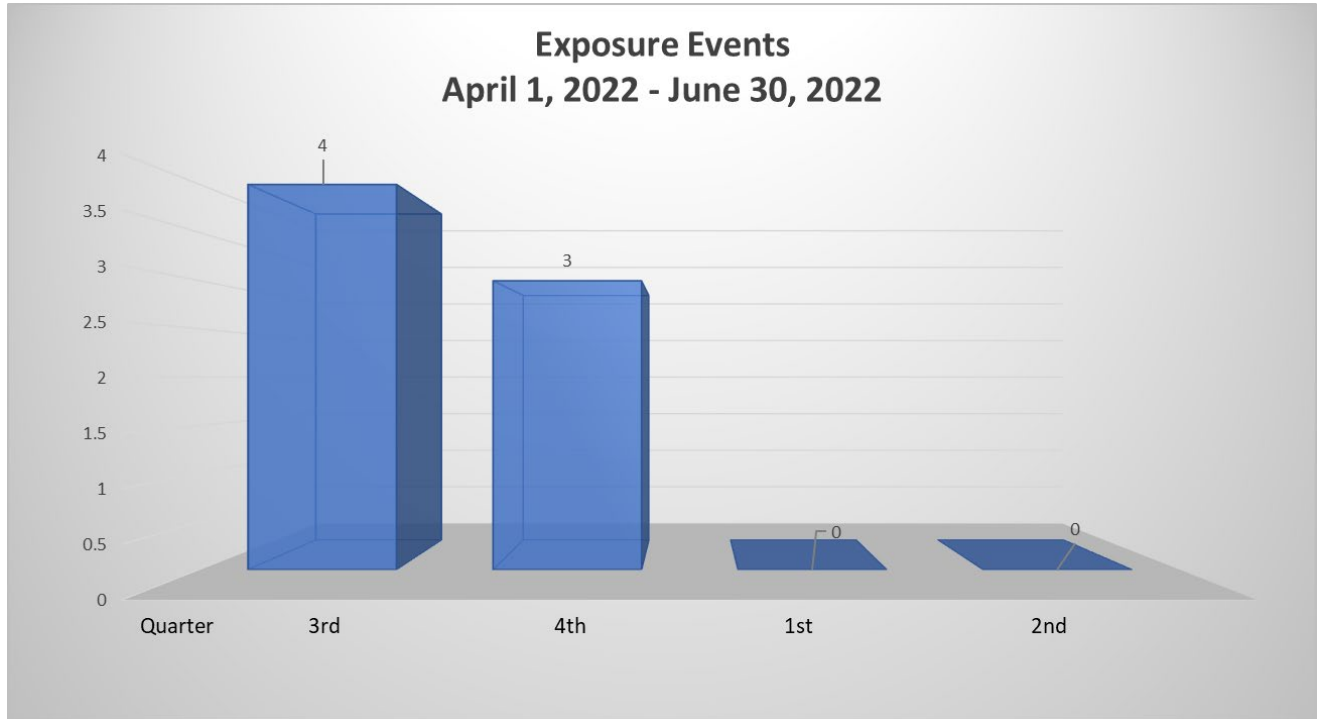
Staff Activities

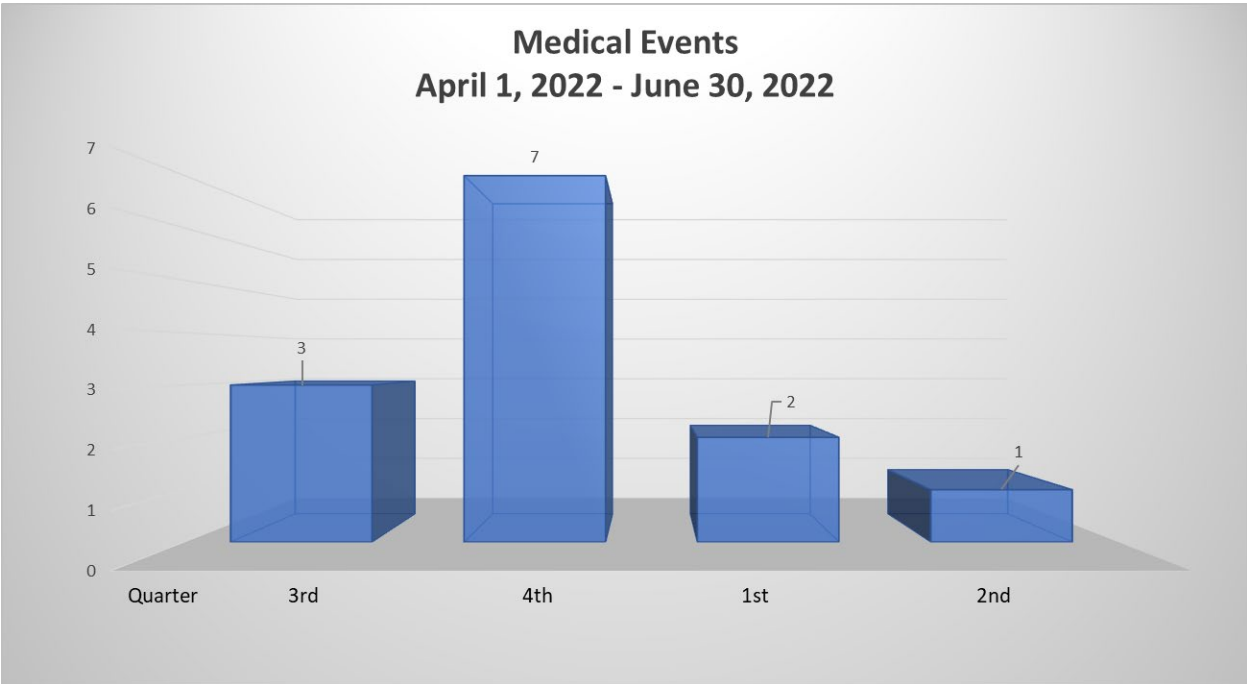
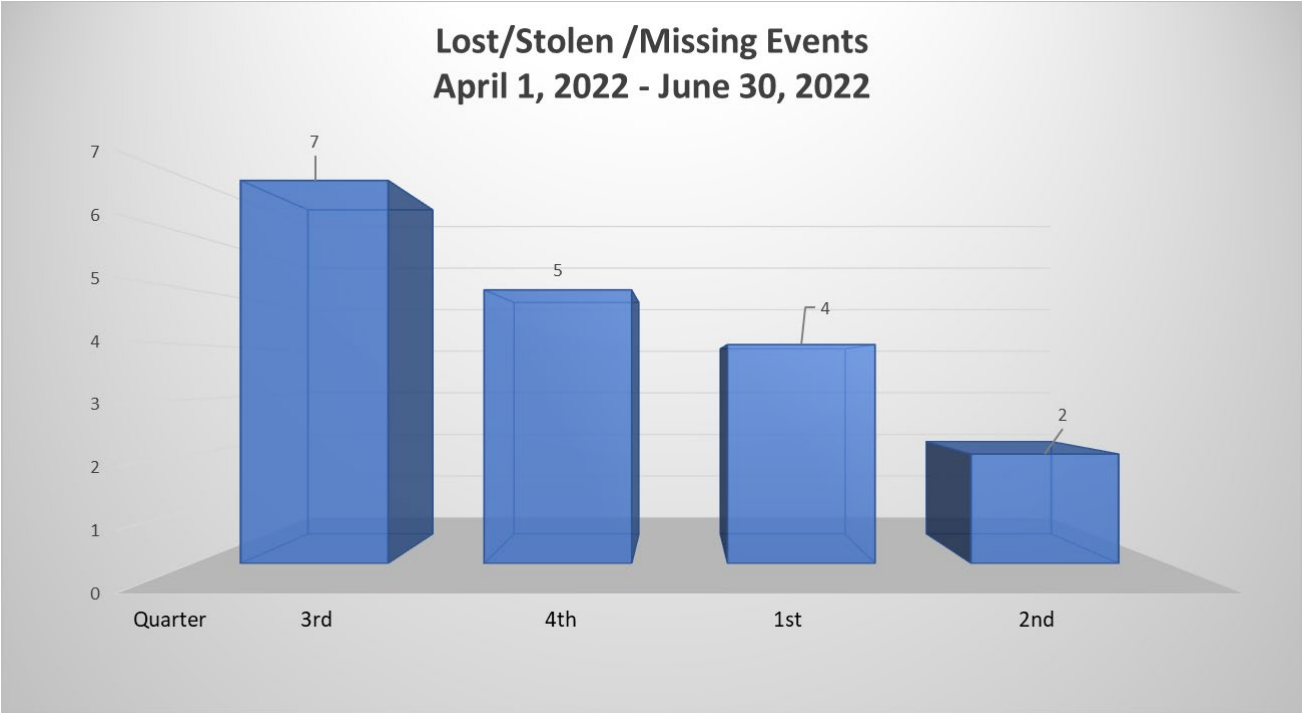
- July 2022 - Two staff members participated in the Days After Workshop sponsored by the Department of Energy's National Nuclear Security Administration, the Environmental Protection Agency, and the Israel Atomic Energy Commission. The workshop focused on the technical and operational challenges associated with the concept of returning to normality following a radiological/nuclear incident. Attendees collaborated to identify the critical gaps related to the days, weeks, and years following the emergency phases.
- August 2022 - Organization of Agreement States Annual Meeting, Fort Worth, Texas. Twenty one staff members attended. Topics related to the National Materials Program included material event reporting, revisions to the inspection manual and procedures, category three transfers, fusion energy, staffing & training, various medical use licensing actions,

transportation packaging, waste management partnership, special nuclear material accountability, and generally licensed devices in the metal recycling stream.

Incident Investigations

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





Medical Event Summaries:

May 2022 - The Program was notified by the licensee's radiation safety officer (RSO) that they had discovered multiple medical events had occurred at their facility. The licensee discovered the distance for the source to travel on a pulsed dose rate unit (PDR) was longer than what was entered into the treatment planning system. This resulted in underdoses to the intended tissue. The licensee has identified three cases between November 2020 and February 2021 that resulted in underdoses of 92%, 95%, and 67% for a

single fraction of three patients. The RSO stated they notified the prescribing physicians and patients involved. The source was an iridium – 192 source, and the activity would vary depending on the date that the treatment occurred. The RSO stated that due to the distance being longer than believed, another tissue was exposed to a higher-than-expected dose, and in some events, the source may have never entered the patient. The licensee has changed the operating procedure to require the measurement of transfer guide lengths prior to each treatment and reviewed this event with its personnel. No violations were cited.

June 2022 - The Program received a call from a cancer center's radiation safety officer (RSO). The RSO reported the center treated a patient from another state with 182 millicuries of I-131 (Azedra) on Monday. The patient later passed away on Wednesday of the same week. As part of their cultural tradition, the patient's family requested the body be returned for burial in their home state within 24 hours.

The licensee reported the patient radiation level was 19 millirem/hour at 1 meter from the thyroid. DSHS worked with the cancer center, the Nuclear Regulatory Commission, and the patient's home state Radiation Control Bureau to discuss potential options to meet the family's requests while maintaining public safety and regulatory compliance. The RSO conferred with the family, and they agreed to leave the body at the facility until the radiation had decayed to a level that would not create any exposure problems. After 27 days, the licensee reported the body was embalmed. All waste was collected and will be stored for decay until it reaches safe background levels. The body was delivered to the family 30 days after death