



**Department of State Health Services (DSHS) Fourth Quarter 2014 Program Report to the Texas Radiation Advisory Board (TRAB)**

**November 7, 2014**

**Radiation Safety Licensing Branch**

**Radioactive Material Licensing Group**

- Due to the recent passing of Bob Gallagher it is unknown at this point if Nuclear Sources and Services Inc. (NSSI) will be part of the pilot plant project to remove tritium from coolant water from the nuclear power plants in Fukushima Daiichi Japan. The scope of the pilot project was changed from a 3 inch column to a 12 inch in column for separating the hydrogen isotopes and from 10 barrels of water to 100. The new NSSI management and representative of Kurion, who owns the rights to the patented process, are meeting to decide on NSSI's future involvement.
- There has been one new licensing request from a public water system in the past quarter from the city of San Angelo. The system will be has been installed by WRT and will be formally under WRT's license. The city of Eden radium removal system is scheduled for start-up in November and will be licensed under WRT's license.
- There are presently 61 registered waste shippers and transporters. As of October 27, 2014, DSHS has billed \$620,482.20 to the waste shippers sending low-level radioactive waste to the WCS compact disposal site in Andrews County, Texas. In-Compact Shippers have been billed \$330,043.40 and Out-Of-Compact Shippers have been billed \$290,438.80. Effective August 1, 2014 we have billed over \$500,000 in shipper fees. As of August 1, 2014, having reached the \$500,000 cap for In-Compact shippers, we no longer collect the \$10 per cubic feet from the In-Compact Waste shippers, Vermont and Texas.

**Radiation Machine Source Group**

- The Radiation Machine Group received an application for a new proton therapy center. Texas Oncology, McKesson Specialty Health and Baylor Health are collaborating to build the Texas Center for Proton Therapy in the Dallas/Fort Worth Area. Representatives from the therapy center will be making a presentation to DSHS staff on November 10, 2014.

## **Radiation Enforcement**

- During the third quarter of Calendar Year 2014 (July 2014 – September 2014), the Enforcement Unit issued 33 Orders against individuals and companies that were found to have violated the Texas Regulations for Control of Radiation (25 Texas Administrative Code §§289.201 – 302). These Orders have resulted in the assessment of \$91,465.00 in administrative penalties and 14 Revocations (All of these revocations were due to non-payment of registration and license fees).

## **Radiation Policy, Standards, and Quality Assurance Group**

- No rules will be presented at the TRAB meeting on November 7, 2014.
- Status update of the following rules presented at the TRAB meeting on January 31, 2014.

§289.201 concerning general provisions for radioactive material

§289.202 concerning standards for protection against radiation from radioactive materials

§289.251 concerning exemptions, general licenses, and general license acknowledgements

§289.252 concerning licensing of radioactive material

§289.253 concerning radiation safety requirements for well logging service operations and tracer studies

§289.255 concerning radiation safety requirements and licensing and registration procedures for industrial radiography

§289.256 concerning medical and veterinary use of radioactive material

§289.257 concerning packaging and transportation of radioactive material.

- The adoption packet for these rules (known as our "RAM1 Combo" packet) has been approved by Regulatory management and has been forwarded to the DSHS Office of General Counsel for final approval. Three changes were made from proposed to adoption in §§289.252 and 289.256 due to typographical-type errors. In addition, wording in §289.257 was removed because part of the text was not consistent with Health and Safety Code, §401.307(a) relating to the perpetual care account for radiation. The verbiage being removed was more for informational purposes and not a directive nor considered urgent and will be considered in future rulemaking. Pending approval by all of the authorities including the HHSC Executive Commissioner, we anticipate the effective date of the adopted rules to be on or around January 12, 2015.

- Status update on our Draft radioactive materials rules (known as our "RAM2 (Part 37)" packet).

§289.201 concerning general provisions for radioactive material

§289.202 concerning standards for protection against radiation from radioactive materials

§289.251 concerning exemptions, general licenses, and general license acknowledgements

§289.252 concerning licensing of radioactive material

§289.257 concerning packaging and transportation of radioactive material

- We received numerous comments from staff and the public that will be addressed at a staff meeting in the near future. We anticipated that these rules would be presented to the TRAB as proposed rules at the First Quarter 2015 meeting. That presentation may change to the Second Quarter 2015 meeting due to the upcoming legislative session.

### **Radiation Inspection Branch**

#### **Environmental Monitoring Group**

##### **Incident Investigations**

On September 18, 2014, The Agency was notified by the Licensee's Radiation Safety Officer (RSO) that two radiographers working at a field location may have received exposures in excess of the annual whole body exposure limit. One radiographer was working in the darkroom while the other, a trainer, was taking shots. The trainer cranked in the source but failed to fully retract it into the shielded position. The trainer then carried the camera to the tailgate and sat nearby for several minutes. The situation was discovered when the radiographer in the darkroom found all the film to be fully exposed and black. The radiographer in the darkroom received 1.58 rem to his personal dosimeter. The radiographer outside of the darkroom was not wearing any safety or monitoring equipment except for an off scale pocket dosimeter. Reenactments with a health physics consultant concluded that the trainer received 4.74 rem to the body and 5.73 rem to the gonads. These calculations are pending a final blood work report. An investigation into this event is ongoing.

On September 20, 2014, the Agency was notified by the licensee that two Thermo Fisher Scientific Model 5190 density gauges, each containing a 200 millicurie cesium-137 source, had been involved in a large fire. Two other gauges were involved but were not directly in the fire. This occurred at an oil field temporary job site. The licensee's radiation safety officer (RSO) stated that the fire burned over twenty vehicles. There were no worker or public exposures due to this incident. It was determined that one of the gauge's shielding had been compromised. The gauges were secured, then packaged and transported to the manufacturer for evaluation. The investigation into the incident is ongoing.

On July 30, 2014, the Agency was notified by the licensee that a patient had received a portion of a gamma knife treatment intended for a different patient. The incident was investigated at the facility and confirmed that a patient received a portion of a fractional treatment dose intended for another patient. The treatment time was for 2.68 minutes with a calculated total dose of 3.5 gray to the center point maximum with 50% to the isodose lines at 1.75 gray. The error occurred due to rescheduling patient one who had a much longer treatment time than patient two. The schedule change was not communicated

to the nursing staff. This communication error along with a lack\_of patient identification played a major role in the unintended treatment process. The facility completed a root cause analysis of the problem and self-reported the incident. Corrective actions have been implemented to include new policies and procedures incorporating better scheduling, patient identification practices to include “time outs” during the treatment process and limiting distractions during the treatment procedure. No violations were cited.

## **Emergency Planning**

### **Comanche Peak Nuclear Power Plant (CPNPP)**

- Comanche Peak is in the process of finishing up another successful Outage 1RF17.
- On September 11th, 2014 DSHS and CPNPP successfully participated in a Federal Emergency management Agency (FEMA) Evaluated MS-1 medical drill at Lake Granbury Medical Center located in Granbury, TX. The Exercise resulted in one ARCA that was corrected on-the-spot.
- DSHS, CPNPP and FEMA will continue to coordinate in the planning process in anticipation of the upcoming FEMA Evaluated Hostile Action Based exercise to be held on June 10th, 2015.

### **South Texas Project (STP)**

- The STP Dress Rehearsal drill was conducted on September 24, 2014 in Bay City, Texas. This scenario involved a Hostile Action-Based event that occurred after normal working hours (4:00AM-9:30AM). DSHS provided 35 players to participate in the exercise along with 1 HHSC employee, 3 TCEQ personnel and 6 DPS Commercial Vehicle Enforcement Troopers. The exercise was successful in finding radio communication issues that needed to be corrected prior to the Graded Exercise.
- The STP FEMA Evaluated Exercise was conducted on November 5, 2014.

### **Waste Isolation Pilot Project**

- DSHS WIPP staff provided briefings to local official in seven jurisdictions regarding the Waste Isolation Pilot Plant in August and September. In addition, radiological emergency response instrumentation was updated along the WIPP transportation route in Smith, Eastland and Palo Pinto counties.
- On September 11 and 12<sup>th</sup>, 2014 DSHS/WIPP staff attended the annual Texas Radiation Conference in Austin

- DSHS/WIPP staff continues to monitor the status of the WIPP site near Carlsbad, NM. Radiological controls in certain buffer areas of the underground continue to be assessed and updated. Progress on re-entry into the affected panel is being made with plans to map Panel 7, Room 7 set for this fall.

### **Radioactive Materials (RAM) Inspections Group**

- Two inspectors were hired for Region 6, the Houston area, and began training in September. Interviews for two vacant Region 6 inspector positions will be held in mid-November.
- The Radioactive Materials Group annual staff meeting was held in Austin on October 13-16, 2014.
- Radiation Branch staff attended the Galveston Wharves Board meeting on October 27<sup>th</sup> for the Army Corps of Engineers presentation of the Sturgis decommissioning plan. The Sturgis ship contains the nation's only floating nuclear power plant. Plans are to decommission the ship in the Galveston port during the upcoming 18 months.

### **X-Ray Groups**

- Over 4600 routine x-ray inspections were performed in FY2014
- Austin and San Antonio area inspectors and managers attended and presented at the 2014 Texas Radiation Regulatory Conference, giving the Department a chance to interact one on one with the registrants and answer their questions. The fluoroscopy training requirement rule is still a hot topic among the Registrants.
- Four of the X-ray Inspectors completed advanced training on fluoroscopy, computed tomography and therapy inspections.

### **Mammography and Remote Inspections Group**

- 174 remote inspections have been issued for FY2015. Staff are working on 555 open remote inspections.
- All mammography inspections are being conducted timely, none are past due.
- A bankruptcy court has awarded DSHS custody of the mammography records from the bankrupt Brownsville Doctor's Hospital. We are working with Iron Mountain to send as many of the records as possible to the patients and maintain the remainder available on file in storage for 5 years. The distribution is expected to start by 2/1/15.