

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

January 6, 2007

Radiation Safety Licensing Branch

- Personnel changes:
 - Ruth McBurney, Manager of the Radiation Safety Branch, will be retiring with over 25 years service at DSHS and its predecessor agency, the Texas Department of Health, effective January 31, 2007.
 - Jan Endahl, a health physicist that manages the industrial radiography certification program, will be retiring at the end of February 2007 with over 25 years state service. Bridget Stephens, Health Physicist in the Radioactive Materials Licensing Group is being trained as back-up and interim staff person for these duties.
 - One vacant civil engineer position in the Technical Assessments Group has been temporarily inactivated, due to budget constraints.
 - One vacant environmental specialist position in the Machine Source Group has been temporarily inactivated, due to budget constraints.
 - William Stringfellow, Health Physicist in the Radioactive Materials Licensing Group, is moving to a position with the Texas Commission on Environmental Quality. This vacant position has been posted.

- Participation in National Source Tracking System
 - Updating Category 1 and 2 sources interim licensee database (NRC is contacting licensees and obtaining source information)
 - Provided NRC with licensee database including those with Category 1, 2, 3, and 3.5 sources
 - Developing a license condition that will go on all licenses authorized for manufacturing and distribution of Category 1 and 2 sources that will require source tracking (required to be in place by February 6, 2007). Each source will be required to have a unique serial number.

- A recent advisory was sent to all medical use licensees to provide patients retaining medical radioisotopes and sources with cards indicating that the radioactivity they contain was due to medical diagnosis or treatment. Some patients in other states have been setting off alarms in tunnels and on public transportation. The cards would provide information to responders to alarms of the minimal hazard and a point of contact at the medical facility for more information.

- The complete application to the U.S. Food and Drug Administration for recognition of DSHS as a certifying agency for mammography was finished and mailed this week.
- Working Group established on acceptable physicist certifications for medical use licenses:
 - A working group, made up of three consulting medical physicists and three DSHS staff members are working on proposed recognition standards for certifications needed for Authorized Medical Physicists (AMPs) and Radiation Safety Officers (RSOs).
 - A letter was sent to the Texas Board for Licensed Medical Physicists (LMP) that provided them with the opportunity to apply to have the state licensure of therapeutic medical physicists recognized as a recognized board for AMPs. Texas LMP Board procedures would be required to ensure compliance with NRC qualification criteria.
- Technical Assessments staff have completed review of an application to perform reclamation at the IEC site. One uranium license is under review for renewal and expansion and another expansion amendment request is anticipated by early February.
- Technical Assessments staff continue to meet periodically with representatives from Waste Control Specialists to discuss licensing issues involved with their application for uranium byproduct material disposal. A response to the last deficiency letter is expected by the end of January 2007.
- 2007 Texas Radiation Regulatory Conference:
 - DSHS staff members are working with the South Texas Chapter of the Health Physics Society to plan the 2007 Regulatory Conference.
 - Date: September 5-7, 2007
 - September 5: 6-8 hours Mammography Continuing Education for technologists and physicists
 - September 6: Plenary and Main Session, vendor displays, reception and dinner with guest speaker
 - September 7: Main Session and vendor displays

Radiation Policy, Standards, and Quality Assurance Unit

- Increased Controls - PSQA staff is maintaining a spreadsheet of IC inspection results, including the inspection date, inspector, reviewer, number and type of violations, whether the case was sent to Enforcement and why, and any proposed penalty. As of December 28, 2006, 100 increased controls inspections

have been performed and reports submitted. Most of these inspections have been of industrial radiographic operations because of the increased controls prioritization schedule.

- An additional rulemaking has been added to the rulemaking schedule for 2007. NRC's final rule for the National Source Tracking System has been published and it is an immediate, mandatory item of compatibility. Because of the deadline dates associated with this rule, it is now a priority item on the 2007 schedule.
- PSQA staff will be responsible for coordinating and compiling bill analyses and cost estimates for any radiation-related bills assigned to the Regulatory Division. These documents have already been prepared for HB174, a pre-filed bill concerning laser hair removal.
- Two PSQA staff members will be going to IMPEP training at NRC headquarters in January. One of those staff members has already conducted an IMPEP review (Wisconsin) and is scheduled to review the North Dakota radiation control program in April.

Radiation Inspection Branch

Environmental Programs/Incident investigations

- Heightened Oversight – As part of a follow up review of the Radiation Control Program, incident files were reviewed. The review was completed by an NRC review team under the Integrated Materials Performance Evaluation Program (IMPEP) November 13-17, 2006. The Incident Investigation Program manages these files. The program is required to notify NRC when incidents meeting certain criteria are reported by Texas licensees. In addition, the program updates records in the Nuclear Materials Events Database (NMED). Issues the reviewer noted included numerous late reports to NRC, incomplete records in NMED, and within RCP incident files. The list of files reviewed and the concerns of the review team were not provided to the program until 5:00pm the last day of the review. After reviewing the available information, the Incident Investigation Program found that reports were submitted timely and that many of them are documented on the NRC web site. In addition the IMPEP reviewer(s) concluded incident files were incomplete for various reasons. Our review indicates that the necessary information existed in the file, but was incorrectly interpreted by the IMPEP reviewer. IIP strongly disagrees with the conclusions of the IMPEP draft report and is writing a detailed reply.
- Letourneau incident - On July 25 LeTourneau, Incorporated, reported detecting radioactive material in their arc furnace ash (by-product of steel production referred to as K061). Radiation was detected at the Horsehead Resource Development Company in Rockwood, Tennessee, indicating the possible presence of radioactive material in a truck transporting the furnace ash. The truck

was returned to the LeTourneau facility, where it was isolated. On 7/24/2006, LeTourneau obtained the services of a consultant to identify the material in the truck. Surveys indicated the presence of Cs-137. After determining that the K061 in the truck was contaminated with Cs-137, a full survey of the furnace facility was performed and samples collected to quantify the activity. Exposure levels in the facility ranged from 50 to 3000 uR/hour. The highest radiation readings were in the ash hopper and silo. LeTourneau collected additional samples and the State of Texas Department of Health Services investigated the incident. The time frame for the material in the truck was from 6/29/2006 (when the last shipment was made to Horsehead) to 7/10/2006 (when the truck alarmed the radiation monitors at Horsehead). The recycled metal was obtained from a dozen or more of Letourneau's customers. At this time, Letourneau has not been able to determine the origin of the cesium-137 source. Letourneau continued operations temporarily and additional truckloads of contaminated K061 waste were generated. The furnace was shutdown on 8/6/2006. Decontamination work began on 8/7/2006. Clean up and release of the furnace and fly ash system from the furnace head up to and including the bag house and replacement of all bag house filters was completed on 8/13/2006. The furnace returned to operation on 8/14/2006. Fly ash is being collected and analyzed for Cs-137. The fly ash silo is currently bypassed and is being decontaminated, and surveyed for release. The latest fly ash sample indicated 1.48 Bq/gram (40 pCi/gram). That value is higher than expected due to reduced plant operation time creating limited fly ash production. Letourneau will coordinate with the Tennessee radiation control program and Horsehead to confirm that the furnace ash containing less than 2 picocuries/gram of Cs-137 will be accepted for recycling. All furnace ash containing higher levels will be processed and sent for disposal to Envirocare, Utah and, possibly, at US Ecology in Idaho. This proposal for recycling and disposition is based on an NRC technical position published in the Federal Register in March 1997.

- Hospital Incident - An investigation was initiated due to the reported loss and recovery of a manual brachytherapy sealed source (11.4mCi, Cs-137). The device was lost in the course of a patient treatment. Apparently, the source was not properly inserted into the ovoid part the intercavitary applicator implanted into the patient for treatment of cervical cancer. The source (one of five) remained in the patient bed for some 30 hours before it was subsequently removed from the hospital when bed sheets were changed and it ended up on the floor of a commercial laundry. It remained there until hospital staff retrieved it some 21 hours later. This was the second such occurrence over the last six months. This event was not reportable as a medical event. The reduced dose was less than 5 % of the prescribed dose. The licensee will be required to change procedures for using the device as well as for training residents using them.
- Moisture/Density Gauge Incident - On Wednesday, November 15, 2006, the Agency received a phone call from the Radioactive Material License Program Director in Alabama that a moisture/density gauge was on sale at the E-Bay website. The State of Alabama was concerned that this gauge belonged to an

Alabama licensee that had a similar gauge stolen on November 12, 2006. The advertisement indicated that the Troxler Model 3430 gauge was in Waco, TX. On that same day two Agency investigators traveled to Waco, TX, and recovered the advertised gauge. The pawnshop voluntarily surrendered the gauge to the investigators. After obtaining the serial number from the device, investigators determined it was reported stolen from a Texas licensee on June 16, 2006 in Brookshire, Texas. The Agency immediately notified the original owner and also notified NMED of the recovery of the missing gauge. Investigators obtained the name of the individual who pawned the gauge and provided the owner with the individual's identity. The owner provided the information to Houston police.

Emergency Planning

- An evaluated emergency exercise with Comanche Peak is scheduled for August 29, 2007. The exercise will be a plume phase exercise and will involve the local jurisdictions affected as well as state and utility emergency response organizations. Emergency planners within the radiation control program are working with Comanche Peak and FEMA to establish evaluation areas and develop the scenario for the exercise.
- Emergency Planners from the Radiation Control Program participated in evaluated exercises on November 15-16, 2006 at South Texas Project to demonstrate medical and reception center facilities' capabilities to handle patients and evacuees involved in a radiological event. The evaluation report on these exercises found no deficiencies or areas recommended for improvement.

Mammography Inspection Group

- There are 43 inspections past due. 18 of them are in the West Texas and Panhandle area, where the inspector position was vacant until 10/01/06. But, Tim Gibson is working very hard, spending a lot of time on the road and the backlog is starting to shrink.
- Another 15 past due inspections are in the area covered out of San Antonio, where the inspector has had major health problems that are continuing. The three back-up inspectors in the central office will be stepping up efforts to help him knock the backlog down in the upcoming quarter.
- Remote Inspections: No remote inspections are past due. In the first quarter of FY07, 550 remote inspection requests forms were mailed, to dental, veterinary, podiatry and minimal threat device registrants. This high number is part of the heavy start-up volume, that was caused by past due onsite inspections. As of December, we will begin sending about 105 inspection request forms per month, which should be a typical month.
- There are no open positions in the Mammography or Remote Inspection Group.

Radiation Safety Officer Report

- On October 24 and 25, 2006 a Railroad Commission (RRC) contractor, Texas World Operations, plugged the contaminated well in Winnie, TX, Evans Well #1. Well Plugging resulted in the collection approximately 200 gallons of fluid with detectable levels of Am-241 from the well's annuli. Details of the operation should be available from RRC.
- Instrument calibrations are complete for radioactive material inspectors. We are currently completing calibration of Emergency Response instruments. Part of these calibrations will include the exchange of pre-staged instruments in Amarillo during January 2007.
- The RSO continues to work on the disposal of radioactive materials (RAM). There are continuing questions about the amount available for use in Perpetual Care Account (PCA). We also have committed money to assist RRC with "Winnie" surface reclamation (See above). We have replaced the wooden fence at the RAM downhole storage at Central Campus with a security fence. Currently, there has been no other use on funds available in the PCA.

Radioactive Materials Inspection Group

- IMPEP:
 - a. Overdue Inspections: Less than 20 inspections are overdue on the NRC intervals and we anticipate being caught up no later than the end of February. The program now has the capability to projecting which inspections are coming due and is now scheduling inspections before they become due.
 - b. Annual accompaniments: All accompaniments for 2006 were performed during the year. Assignments of field inspectors to the PSQA and Inspection Groups have already been made. A quarterly review of accompaniments will be performed to ensure all the accompaniments are performed.
 - c. The inspection program is working with the Radioactive Materials Licensing Group on a self-evaluation for the SSD manufacturers. Presently the field inspectors have to perform this activity during their routine inspection. The purpose of this activity is to determine if the manufacturer has modified any device/source without obtaining the program's approval and to determine if the manufacturer is having any generic defects. The Licensing Group will review the self-evaluation.
- INSPECTOR TRAINING:

One inspector has been released to perform independent inspections. A second inspector has been accompanied. After the inspection reports have been evaluated the second inspector should be released to perform independent inspections.

- STAFFING CHANGES:

One of the Austin based inspectors duties will be modified in late January or early February so they can assist the RAM Inspection Group Manager. The inspector's uranium inspection duties will be transferred to another central office staff member and the field staff will perform the NORM inspections. The central office inspector will still perform the manufacturer inspections. In addition, they will oversee the GLA self-evaluation, reciprocity inspections and, when implemented, SSD self-evaluation. This individual will also work with PSQA on the planning of the field staff meetings and keeping track of formal training received by the field staff.

X-ray Inspection Group

The testing of flatness and symmetry at therapy facilities has been eliminated from the inspection process. Our rationale for elimination of the testing was based on no longer having a working machine to evaluate test results and a review of facility histories demonstrating few health and safety compliance issues.

The X-ray Group has completed the training for three new x-ray inspectors and still has one inspector in training.

We are seeking a reliable way to obtain information on new types of x-ray units and new technologies that are put into use. This would be helpful to inspectors prior to finding the new equipment during an inspection.

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