

May 4, 2010

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Research, State, Tribal, and Compliance Programs  
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FROM: Aaron T. McCraw, IMPEP Project Manager */RA/*  
Division of Materials Safety and State Agreements  
Office of Federal and State Materials  
and Environmental Management Programs

SUBJECT: INTEGRATED MATERIALS PERFORMANCE EVALUATION  
PROGRAM REVIEW OF THE TEXAS AGREEMENT STATE  
PROGRAM

This memorandum transmits to the Management Review Board (MRB) a proposed final report (Enclosure 1) documenting the Integrated Materials Performance Evaluation Program (IMPEP) review of the Texas Agreement State Program. The review was conducted by an interoffice team during the period of February 22-26, 2010. The review team issued a draft report to the State on March 25, 2010, for factual comment. The Texas Department of State Health Services responded to the findings and conclusions of the review by letter dated April 14, 2010, from Kathryn C. Perkins, RN, MBA, Assistant Commissioner, Division of Regulatory Services. The Texas Commission on Environmental Quality responded to the findings and conclusions of the review by letter dated April 14, 2010, from Mark R. Vickery, P.G., Executive Director. Texas provided corrections and clarifying comments, most of which were incorporated into the proposed final report. In its response, the Texas Department of State Health Services challenged the review team's decision to keep open a recommendation from the previous review. The review team is prepared to discuss its justification for keeping the recommendation open during the MRB meeting.

The review team is recommending that Texas's performance be found "satisfactory" for all performance indicators reviewed. Overall, the review team is recommending that the Texas Agreement State Program be found adequate to protect public health and safety and compatible

with NRC's program. Based on the results of the current IMPEP review, the review team is recommending that the next IMPEP review of the Texas Agreement State Program take place in approximately 4 years.

The MRB meeting to consider the Texas report is scheduled for **Wednesday, May 19, 2010, from 10:00 a.m. – 11:30 a.m. EDT, in Two White Flint North, Room 2-B5**. In accordance with Management Directive 5.6, *Integrated Materials Performance Evaluation Program (IMPEP)*, the meeting is open to the public. The agenda for the meeting is enclosed (Enclosure 2).

If you have any questions prior to the meeting, please contact me at 630-829-9650.

Enclosures:

As stated

cc w/encl: Susan Jablonski, Director  
Radioactive Materials Division  
Texas Commission on Environmental Quality

Richard Ratliff, Manager  
Radiation Safety Licensing Branch  
Texas Department of State Health Services

Roger Mulder, State Liaison Officer  
Texas State Energy Conservation Office

Robert Gallagher, Massachusetts  
Organization of Agreement States  
Liaison to the MRB

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF THE TEXAS AGREEMENT STATE PROGRAM

February 22-26, 2010

**PROPOSED FINAL REPORT**

Enclosure 1

## 1.0 INTRODUCTION

This report presents the results of the review of the Texas Agreement State Program. The review was conducted during the period of February 22-26, 2010, by a review team composed of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the States of Illinois, Minnesota, and Washington. Team members are identified in Appendix A. The review was conducted in accordance with the "Implementation of the Integrated Materials Performance Evaluation Program and Rescission of Final General Statement of Policy," published in the *Federal Register* on October 16, 1997, and the February 26, 2004 NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period of September 17, 2005, to February 26, 2010, were discussed with Texas managers on the last day of the review.

[A paragraph on the results of the Management Review Board (MRB) meeting will be included in the final report.]

The Texas Agreement State Program is administered by two State agencies, the Texas Department of State Health Services (the Department) and the Texas Commission on Environmental Quality (the Commission). Organization charts for the Department and the Commission are included as Appendix B.

The Department regulates approximately 1,657 specific licenses authorizing byproduct, source, and certain special nuclear materials (radioactive materials). The Commission has regulatory responsibility for low-level radioactive waste (LLRW) disposal activities in Texas. Effective June 2007, the Texas Legislature transferred jurisdiction over uranium recovery facilities from the Department to the Commission. The review focused on the State's regulation of radioactive materials as it is carried out under the Section 274b. (of the Atomic Energy Act of 1954, as amended) Agreement between NRC and the State of Texas.

The Department's portion of the Agreement State Program is located in the Division for Regulatory Services. The Division has two sections, the Health Care Quality Section which includes all licensing functions; and the Environmental and Consumer Safety Section which includes inspection and quality assurance programs.

The Commission's portion of the Agreement State Program is located in two Offices. The Office of Permitting and Registration, Radioactive Materials Division, performs licensing functions. The Commission's inspection program is located in the Office of Compliance and Enforcement, Homeland Security Program.

In preparation for the review, a questionnaire addressing the common and applicable non-common performance indicators was sent to the Department and the Commission on November 9, 2009. Both agencies provided responses to the questionnaire on February 5, 2010. Copies of the Department's and the Commission's questionnaire responses may be found in NRC's Agencywide Documents Access and Management System (ADAMS) using the Accession Numbers ML100400116 and ML100471013, respectively.

The review team's general approach for conduct of this review consisted of: (1) examination of Texas's responses to the questionnaire; (2) review of applicable Texas statutes and regulations;

(3) analysis of quantitative information from the State's databases; (4) technical review of selected regulatory actions; (5) field accompaniments of eight of the Department's inspectors and two of the Commission's inspectors; and (6) interviews with staff and managers. The review team evaluated the information gathered against the established criteria for each common and applicable non-common performance indicator and made a preliminary assessment of the Texas Agreement State Program's performance.

Section 2.0 of this report covers the State's actions in response to recommendations made during the previous reviews. Results of the current review of the common performance indicators are presented in Section 3.0. Section 4.0 details the results of the review of the applicable non-common performance indicators, and Section 5.0 summarizes the review team's findings and recommendations. The review team's recommendations are comments that relate directly to program performance by the State. A response is requested from the State to all recommendations in the final report.

## 2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

The Texas Agreement State Program was placed on heightened oversight following a March 2005 Periodic Meeting with the Department due to concerns with staff turnover, the status of inspections, the timeliness of reporting events, and the status of regulations. The Texas Agreement State Program remained on heightened oversight following a routine IMPEP review conducted in September 2005. The MRB found the Texas Agreement State Program adequate to protect public health and safety, but needs improvement, and compatible with NRC's program. The review team made eight recommendations regarding program performance by the State. The MRB directed NRC staff to conduct a followup review approximately 1 year later.

The followup review of the Texas Agreement State Program was conducted in November 2006. The review team concluded that the State had made considerable progress since the previous review. As a result, the MRB discontinued the period of heightened oversight and implemented a period of monitoring. Four of the recommendations from the 2005 IMPEP review were closed. A periodic meeting held with the State in June 2008 demonstrated additional improvements in the program, and the monitoring process was discontinued.

At the time of this review, four recommendations from previous reviews remained open. The current status of each of the open recommendations is as follows:

1. The review team recommends that the Department report all significant and routine events, as well as followup event information, to NRC in accordance with Office of Federal and State Materials and Environmental Management Programs (FSME) Procedure SA-300, "Reporting Material Events." (Section 3.5 of the 2001 IMPEP report)

Current Status: The Department's Incident Investigation Program has developed a database to report, track, and document events. Use of the database, coupled with an increased understanding of the reporting requirements and mechanisms, has led to improved quality of documentation and timeliness of reporting events. The information contained in the database was routinely queried by the Incident Investigation Program and reviewed for accuracy. The review team confirmed that most events were reported to NRC, as appropriate. The Department did not report several events involving

equipment failures in a timely manner due to a misunderstanding of the reporting requirements. Once the Incident Investigation Program was notified and understood NRC's reporting expectations, they immediately queried their database and reported the applicable events to NRC. This recommendation is closed.

2. The review team recommends that the Department develop and implement an inspection program to verify that the quality assurance/quality control (QA/QC) requirements in the SS&D Registry sheets are being implemented by the manufacturer. (Section 4.2.2 of the 2005 IMPEP report)

Current Status: The review team determined that the Department has developed the inspection program; however, the Department's inspectors are not fully implementing it. The review team discovered through interviews with the Radioactive Materials Inspection Group Supervisor and various inspectors that staff was not aware of the QA/QC inspection guidance. During inspections of manufacturers, the inspectors ask basic QA/QC program questions of the licensee, but do not verify implementation of the QA/QC program as required by the procedure. This recommendation remains open.

3. The review team recommends that the Department conduct an evaluation of the uranium recovery program workload and hire the necessary staff to adequately address the workload. (Section 4.4.1 of the 2005 IMPEP report)

Current Status: The review team determined that the staffing levels are adequate for the existing and future uranium recovery workload, based on discussions with the respective managers. This recommendation is closed.

4. The review team recommends that the Department prepare necessary supporting documentation identifying the bases for the licensing actions associated with reclamation plans for the three conventional mills. (Section 4.4.4 of the 2001 IMPEP report)

Current Status: The review team evaluated the State's approach and technical review of these issues and was satisfied with the technical quality of reports completed to date, including reviews of compliance monitoring and groundwater modeling. This recommendation is closed.

### 3.0 COMMON PERFORMANCE INDICATORS

Five common performance indicators are used to review NRC Regional and Agreement State radioactive materials programs. These indicators are: (1) Technical Staffing and Training, (2) Status of Materials Inspection Program, (3) Technical Quality of Inspections, (4) Technical Quality of Licensing Actions, and (5) Technical Quality of Incident and Allegation Activities.

#### 3.1 Technical Staffing and Training

The Department's staffing and training for the radioactive materials program will be covered in this section of the report. The Commission's staffing and training for the low-level radioactive waste and uranium recovery programs will be covered in Sections 4.3.1 and 4.4.1 of this report, respectively.

Issues central to the evaluation of this indicator include the Department's staffing level and staff turnover, as well as the technical qualifications and training histories of the staff. To evaluate these issues, the review team examined the Department's questionnaire response relative to this indicator, interviewed Department managers and staff, reviewed job descriptions and training records, and considered any possible workload backlogs.

The Department is organized into functional groups rather than program groups. The Radiation Safety Licensing Branch Manager is designated as the radiation control program director and provides a coordinating role among the functional groups. As such, communication between the groups is paramount to achieve an effective radioactive materials program.

At the time of the review, there were 46 individuals, totaling approximately 43.5 full-time equivalents (FTE), with various degrees of involvement in the radioactive materials program. Licensing functions, including sealed source and device review, are performed in the Austin office by the Radiation Safety Licensing Branch. The inspection and incident response programs are located in the Inspection Radiation Branch. Most of the inspection staff is located in 11 regional offices located throughout the State. The Policy/Standards/Quality Assurance Group coordinates rule development, prepares enforcement cases for referral to the Enforcement Review Committee, and plays a major role in quality assurance for the inspection program.

During the review period, 21 individuals left the radioactive materials program, including five managers. Twelve staff members were added during the review period, including several Regional inspector positions. Currently, the program has three vacancies, a recently-created incident investigator position and two environmental specialist positions. The environmental specialist positions do not play a significant part in the Agreement State program.

In January 2010, the Texas Governor requested that each State agency submit a plan identifying a 5 percent savings in appropriations for fiscal years 2010 and 2011. As a result of the Governor's request, the Texas Health and Human Services Commission, implemented a hiring freeze and other personnel-related cost saving actions. The Division for Regulatory Services requested a waiver from those actions in the interest of public health and safety. If the waiver is not granted, significant effects may result for the Agreement State program.

The Department has a documented training plan for technical staff that is consistent with the guidance in the NRC/Organization of Agreement States Training Working Group Report and NRC's Inspection Manual Chapter (IMC) 1246, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area." The Department uses on-the-job training to supplement formal, classroom training. New licensing and inspection staff members are assigned increasingly complex duties under the direction of the licensing or inspection managers, respectively. New inspectors accompany more experienced inspectors during increasingly complex inspections and are assigned independent inspections after demonstrating competence during accompaniment evaluations by their manager. The review team confirmed the qualifications of all staff through review of qualification journals, training records, and documentation of supervisory accompaniments. The review team noted that the incident investigation staff was not issued qualification journals similar to the inspection and licensing staff members. As that program has a relatively new investigator and has a vacant position, the



review team encouraged Department managers to provide similar qualification journals to the incident investigation staff.

The review team noted that Department managers encourage and support training opportunities, based on program needs and funding. The Department has sponsored NRC training courses in the past and will sponsor additional courses in the future, including the Inspection Procedures course in April 2010 and the Licensing Procedures course in September 2010. The review team concluded that the Department's staffing and training is adequate to carry out its regulatory duties.

Based on the IMPEP evaluation criteria, the review team recommends that Texas's performance with respect to the indicator, Technical Staffing and Training, be found satisfactory.

### 3.2 Status of Materials Inspection Program

The review team focused on five factors while reviewing this indicator: inspection frequency, overdue inspections, initial inspections of new licenses, timely dispatch of inspection findings to licensees, and performance of reciprocity inspections. The review team's evaluation was based on the Department's questionnaire response relative to this indicator, data gathered from the Department's database, examination of completed inspection casework, and interviews with the Manager of the Policy/Standards/Quality Assurance Group, the Inspection Radiation Branch supervisors, and staff members.

The review team verified that the Department's inspection frequencies for all types of radioactive materials licenses are at least the same frequency as those listed in IMC 2800, "Materials Inspection Program." For licenses with multiple locations of use, inspections are performed at each location every inspection cycle. A separate inspection report is written for each location of use.

The Radioactive Materials Inspection Group conducted a total of 1,066 inspections of Priority 1, 2, and 3 licensees during the review period. In their response to the questionnaire, the Department indicated that 6 percent of the inspections were completed overdue within the review period and that there were no overdue inspections of those Priority 1, 2, and 3 licensees when the questionnaire was completed. The review team verified the Department's percent of overdue inspections and ascertained that no inspections were overdue at the time of the review.

The review team also evaluated the Radioactive Materials Inspection Group's timeliness for conducting initial inspections. The review team noted that the Radioactive Materials Inspection Group conducted 339 initial inspections during the review period. The objective is to inspect all new facilities within one year, in accordance with IMC 2800 guidelines; however, 16 of those inspections were completed overdue during the review period. The review team verified that there were no overdue initial inspections at the time of the review. Overall, the review team calculated that the Department performed 6 percent of its inspections overdue during the review period.

The review team evaluated the timeliness of issuance of inspection reports. The Department has a policy of issuing the inspection findings to licensees within 30 days from the date of the inspection. Inspectors are required to submit completed inspection reports to the

Policy/Standards/Quality Assurance Group within 15 days. This Group has 15 days to complete their review and to convey the inspection results to the licensee. Of the 40 inspection files reviewed, five reports were issued beyond the 30-day goal.

During the review period, the Department received requests for reciprocity from 192 licensees. The review team determined that the Radioactive Materials Inspection Group conducted reciprocity inspections of 11 percent of those licensees in 2007, 29 percent in 2008, and 28 percent in 2009. The lower percentage of reciprocity inspections in 2007 was the result of the impacts of a Department office flood and significant response to hurricanes. The Department exceeded the NRC's criteria of inspecting 20 percent of candidate licensees operating under reciprocity for the latter 2 years and is on a similar pace in 2010.

The review team verified that Increased Controls inspections were performed concurrent with routine safety inspections. The inspections of Increased Controls licensees evaluated the pertinent aspects of the security measures.

Based on the IMPEP evaluation criteria, the review team recommends that Texas's performance with respect to the indicator, Status of Materials Inspection Program, be found satisfactory.

### 3.3 Technical Quality of Inspections

The review team evaluated inspection reports, enforcement documentation, and inspection field notes for 39 radioactive materials inspections conducted during the review period. The casework examined included a cross-section of inspections conducted by two former and eight current inspectors and covered a wide variety of inspection types. The inspection reports that were reviewed included academic and medical broad scope; diagnostic nuclear medicine; gamma knife; general license distribution; high dose-rate remote afterloaders; industrial radiography; instrument calibration; nuclear pharmacy; and well logging licensees. The review also included both initial and followup Increased Controls inspections. Appendix C lists the inspection casework files reviewed, with case-specific comments.

The Radioactive Materials Inspection Group's inspection procedures are consistent with the inspection guidance found in IMC 2800. Based on the evaluation of casework, the review team determined that inspections covered all aspects of the licensees' radiation safety programs. The review team noted that inspection reports were generally thorough, complete, consistent, and of high quality with sufficient documentation to ensure that licensees' performances with respect to health, safety, and security were acceptable. Inspection report documentation supported violations, recommendations made to licensees, and unresolved safety issues. In addition to paper copies that are maintained in Austin, all inspection documentation is entered into the Department's electronic filing system, which is accessible to all staff members.

The Department has a policy to accompany all staff performing radioactive materials inspections on an annual basis. The inspector accompaniments are currently performed by a senior inspector. The review team encouraged the Manager of the Radioactive Materials Inspection Group to become involved with the accompaniment process, including annual accompaniments of the aforementioned senior inspector.

The review team determined that documents involving Increased Controls inspections were protected, segregated from other files (electronic and paper), and maintained in a manner to limit access. Inspection report files for Increased Controls were in color coded folders and kept separate from the routine inspection reports. Documents that were released to the public in information requests were sufficiently marked as sensitive information, as appropriate.

The review team verified that the Department maintains an adequate supply of appropriately calibrated survey instruments to support the inspection program, as well as to respond to radioactive materials incidents and emergency conditions. Instruments used to support the radioactive materials inspection program are calibrated by Department staff or the manufacturer.

The review team accompanied eight of the Department's inspectors between December 14, 2009, and January 29, 2010. The inspectors conducted inspections of three medical licensees, two industrial radiography licensees, a well logging licensee, a nuclear pharmacy licensee, and a manufacturing and distribution licensee. The inspectors demonstrated appropriate performance-based inspection techniques and knowledge of the regulations. The inspectors were well trained, prepared for the inspections, and thorough in their audits of the licensees' radiation safety programs. The inspectors conducted interviews with appropriate personnel, observed licensed operations, conducted confirmatory measurements, and utilized good health physics practices. The inspectors held entrance and exit meetings with the appropriate level of licensee management. The review team determined that the inspections were adequate to assess radiological health, safety, and security at the licensed facilities.

Based on the IMPEP evaluation criteria, the review team recommends that Texas's performance with respect to the indicator, Technical Quality of Inspections, be found satisfactory.

### 3.4 Technical Quality of Licensing Actions

The review team examined completed licensing casework and interviewed licensing staff and managers for 29 specific licenses. Licensing actions were reviewed for completeness, consistency, proper radioisotopes and quantities, qualifications of authorized users, adequacy of facilities and equipment, adherence to good health physics practices, financial assurance, operating and emergency procedures, appropriateness of license conditions, and overall technical quality. The casework was also reviewed for timeliness, use of appropriate deficiency letters and cover letters, reference to appropriate regulations, supporting documentation, consideration of enforcement history, pre-licensing visits, peer/supervisory review, and proper signatures.

The licensing casework was selected to provide a representative sample of licensing actions completed during the review period. Licensing actions selected for evaluation included 12 new licenses, 3 renewals, 20 amendments, and 3 license terminations. Files reviewed included a cross-section of license types, including: medical diagnostic and therapy, brachytherapy, gamma knife, industrial radiography, nuclear pharmacy, research and development, well logging, and veterinary licensees. The casework sample represented work from each of the license reviewers. A listing of the licensing casework reviewed, with case-specific comments, may be found in Appendix D.

All licensing actions received by the Department are assigned a log number in the Radiation Control LRICS computer tracking system. The licensing action is then provided to one of the three program leaders who assign the action to a license reviewer in their group. The licensing staff is responsible for reviews, deficiency letters, coordination and finalizing the licensing action. Deficiencies are typically communicated via formal letters addressed to the licensee. When a licensing action is completed, the respective program leader reviews the action for quality and signs the licensing action. The review team noted that the licensing actions were consistent with the Radiation Safety Licensing Branch Regulatory Guides, the State's regulations, and good health physics practices. It was noted that the Department authorized medical physicists as "licensed medical physicists" in accordance with the State's regulation, which is different than NRC's practice.

The review team verified the Department's application of the State's financial assurance requirements. The review team evaluated several licenses that met the criteria for financial assurance for decommissioning. The licensees had submitted the appropriate instruments, statement of intent, or decommissioning funding plan required under Texas regulations. The review team determined that the Department had appropriately identified licensees who were required to maintain financial assurance and had taken appropriate steps to ensure the licensees remain compliant with the financial assurance requirements. Financial instruments were appropriately protected from loss or theft.

During the review period, the Department implemented a policy for pre-licensing reviews of all new applicants. The policy incorporated the essential elements of NRC's revised pre-licensing guidance to verify that the applicant would use requested radioactive materials as intended. The Department checked applicants without a known radioactive materials license from NRC or another Agreement State against other types of licensure or registration, including various on-line search mechanisms and interagency communications, to verify the identity of individuals. If a pre-licensing visit was required, then the license reviewer performed the site visit.

The review team evaluated the Department's licensing practices regarding the Increased Controls and Fingerprinting requirements. The review team confirmed that the licensing staff evaluated new license applications and license amendments for application of the Increased Controls and Fingerprinting requirements, as appropriate.

The Department does not routinely mark licenses or documents containing security-related information as recommended in Regulatory Issues Summary 2005-31, "Control of Security-Related Sensitive Unclassified Non-Safeguards Information Handled by Individuals, Firms, and Entities Subject to NRC Regulation of the Use of Source, Byproduct, and Special Nuclear Material." If records are requested by a member of the public, the documents are reviewed and marked as sensitive, as appropriate. The Department reviews documents requested under the Texas Open Records Acts for confidentiality, to determine whether the document should be withheld from public disclosure based on Texas Statutory Code, Section 418.178. This relatively new provision in the code allows documents to be withheld if the information contained in the document was more than likely to assist in the construction or assembly of a radiological weapon or indicated the specific location of radioactive material.

Based on the IMPEP evaluation criteria, the review team recommends that Texas's performance with respect to the indicator, Technical Quality of Licensing Actions, be found satisfactory.

### 3.5 Technical Quality of Incident and Allegation Activities

In evaluating the effectiveness of the Department's actions in responding to incidents and allegations, the review team examined the Department's response to the questionnaire relative to this indicator; the Department's incident and allegation procedures, including those for reporting incidents to NRC's Headquarters Operations Center and the Nuclear Material Events Database (NMED); and evaluated the Department's casework files and database for selected incidents and allegations.

The review team evaluated the Department's actions related to 11 incidents that were reported during the review period. A listing of the incident casework examined, with case-specific comments, is included as Appendix E. The review team evaluated the Department's response to 12 allegations received during the review period, including eight allegations referred to the Department by NRC during the review period.

The Incident Investigation Program is responsible for initial response and followup to incidents and allegations involving materials regulated by the Department. Allegations are referred to by the Department as "complaints." At the time of the review, the Incident Investigation Program was composed of a manager and three incident investigators. During the review period, the Department processed approximately 150 incidents and approximately 60 complaints related to materials covered by the State's Agreement with NRC.

Following the previous IMPEP review, written procedures were developed by the Department for the receipt, processing, documenting, tracking, and reporting, incidents and allegations. At the time of the current IMPEP review, these procedures were under revision by the Incident Investigation Program to enhance their processes and procedures based on operational experience to provide additional guidance where necessary and clarify reporting requirements. Additional guidance on the conduct of investigations and investigation techniques was located in the Department's Radioactive Materials Inspection Manual.

The majority of incidents and complaints were investigated by the Incident Investigation Program staff. Occasionally, due to the physical location associated with an incident or complaint, or due to workload, the Incident Investigation Program will request that a regional inspector from the Radioactive Materials Inspection Group perform the onsite portion of an investigation. The Incident Investigation Program staff reviewed the results of the investigations conducted by regional inspectors. Followup actions were performed by the Incident Investigation Program, as necessary. The Department has a policy in place that provides a standard procedure for the handling of these types of shared responsibilities for incidents and complaints.

All incidents and complaints were tracked by the Department in a database that was developed following the 2006 followup IMPEP review. The database allows for searches, queries, and report generation to better manage the incident response program.

The incidents selected for review included medical events, lost/stolen material, loss of control of material, contamination events, equipment failure, and damage to equipment. The review team found that the Department's response to incidents was prompt, taking into consideration the health and safety or security significance of the event. As appropriate, incident investigators or inspectors were dispatched to events for an on-site response in a timely manner, often on the day the event was reported. On-site responses often included the performance of radiological surveys and measurements for fixed and removable radioactive contamination, as well as the collection of soil/water samples for the determination of radiological constituents. The casework files for incidents indicated that both on-site and in-office reviews of incidents were thorough and that the documentation of the investigations was generally complete. The review team did note a few inconsistencies and completeness issues with some of the medical event documentation. These comments were provided to Incident Investigation Program staff and Department management during the review. When appropriate, the Department issued enforcement actions as a result of their investigations.

The review team performed an evaluation of the Department's actions related to 12 complaints. Eight of the complaint files reviewed were those related to allegations that were referred to the Department by NRC during the review period. The review indicated that the Department took prompt and appropriate action in response to the allegeders' concerns. Of the 12 complaint casework files reviewed, investigations were found to be thorough and the documentation of the complaint resolution was generally complete. During the on-site review, discussions with the reviewer and investigators developed additional information regarding one of the allegations that NRC referred to the Department. As a result of this new information, the case file was reopened and the Incident Investigation Program staff initiated supplemental investigation activities.

An Assistant General Counsel from the Department presented the review team with an overview of Texas statutes related to open records. Texas Government Code, Chapter 552, addresses Texas open government rules and the Texas Public Information Act. It specifically addresses written requests for information from State agencies. To implement the Texas Public Information Act, the Texas Attorney General has developed procedural rules, which the Department has adopted. The Department's position is that allegeders' identities cannot be protected from release unless the allegeder specifically requests that their identity be withheld or if the Department determines on a case-by-case basis that the allegeder's identity needs to be protected to encourage the reporting of information to the agency. In either situation, even if this request is made, the Department would need to take specific action through the Texas Attorney General's office within a specified time frame to block the release of the information. In some cases, the release of the allegeder's identity cannot be blocked even through legal action. As a result, when allegeders are made aware that their identities potentially could, and likely would be, released through an open records request, they sometimes refuse to provide their identification and contact information. This precludes the Department from providing the allegeders with feedback regarding the resolution of their concerns. Other times, Department staff have discouraged allegeders from providing their identity and contact information, which again precludes feedback regarding resolution of concerns. The Department has a Complaint Process Improvement Team in place that has been looking into these issues and trying to develop means through which feedback can be provided to allegeders even if they choose to remain anonymous. When allegeders did provide their identification and contact information, the Department provided feedback regarding their concerns either verbally or in writing.

Based on the IMPEP evaluation criteria, the review team recommends that Texas's performance with respect to the indicator, Technical Quality of Incident and Allegation Activities, be found satisfactory.

#### 4.0 NON-COMMON PERFORMANCE INDICATORS

Four non-common performance indicators are used to review Agreement State Programs: (1) Compatibility Requirements; (2) Sealed Source and Device Evaluation Program; (3) Low-level Radioactive Waste Disposal Program; and (4) Uranium Recovery Program. NRC's Agreement with the State of Texas relinquishes regulatory authority for all programs covered by the four non-common performance indicators.

##### 4.1 Compatibility Requirements

Texas became an Agreement State in 1963. In assessing Texas' compatibility requirements, the review team examined the Department's and Commission's responses to the questionnaire relative to this indicator, reviewed the State Regulation Status Data Sheets (SRS) for the Department and the Commission, and conducted interviews with managers responsible for this program area.

##### 4.1.1 Legislation

Both the Department and the Commission are granted legal authority through the Texas Radiation Control Act, Chapter 401 of the Texas Health and Safety Code. Chapter 401 outlines that the Department is the Texas Radiation Control Agency. It further outlines the jurisdictional authorities of the two agencies. For simplicity's sake, the Department has jurisdiction over activities related to radiation and radioactive materials except for those activities that are under the jurisdiction of the Commission. The Commission has the jurisdiction to license and regulate the disposal of radioactive materials, the recovery and processing of source material, the processing of tailings or waste produced by or resulting from the extraction or concentration of uranium or thorium from ore (11e.(2) byproduct material as defined in the Atomic Energy Act, as amended), the commercial processing or storage of radioactive waste, and sites for the disposal of low-level radioactive waste and byproduct material. The Commission is also affected by the Texas Low-level Radioactive Waste Disposal Compact, Chapter 403 of the Texas Health and Safety Code. Each agency was indirectly affected by many other Texas rules and legislation.

The jurisdictional areas noted above are different than those noted during the last IMPEP review. The changes were the result of Texas Senate Bill 1604, which was passed in the Texas 80<sup>th</sup> Legislature in 2007. This bill amended the Texas Radiation Control Act and transferred licensing and regulatory jurisdiction from the Department to the Commission for the recovery and processing of source material, 11e.(2) byproduct material disposal, and commercial processing or storage of radioactive waste. As a result of these changes, certain sections of the Department's regulations in 25 Texas Administrative Code Chapter 289 were repealed and these matters were primarily incorporated into the Commission's regulations in 30 Texas Administrative Code Chapter 336.

The Department and the Commission (as the former Texas Natural Resource Conservation Commission) developed and implemented a Memorandum of Understanding (MOU) in 1996,

which was revised in 1998. The MOU specified the respective responsibilities of the two agencies and stated that the Department and Commission agreed to work together to ensure that complete regulation is maintained for sources, uses, and users of radiation. The MOU also addressed certain operational functions of the two agencies, such as emergency preparedness, instrument calibration, and mutual assistance. The review team noted that the MOU was outdated and did not reflect the current jurisdictions or responsibilities of the two agencies. References to the MOU were retracted from the Commission's regulations although the MOU is still in statute in the Department's regulations under 25 Texas Administrative Code 289.101. The review team encouraged the two agencies to work together to revise the MOU. Such an effort would increase communication between the two agencies with respect to matters related to radiation in the State.

All Texas agencies are subject to sunset review by the Texas Sunset Commission. The Department was last reviewed in 2000 and the Commission was reviewed in 2001. The next sunset review for the Department is anticipated to be within the next year. The sunset review for the Commission was underway at the time of the IMPEP review and was anticipated to continue through 2011. The Radioactive Materials Division is one of the specific programs within the Commission that will be reviewed during the current sunset review. To support this effort, the Commission performed a self-assessment and provided the results to the Texas Sunset Commission.

Additionally, State agencies are required to perform a review of each rule 4 years from the last effective date of the rule. The purpose of the review is to assess whether the reasons for adopting the rule continue to exist; whether the rule reflects current legal considerations, policy considerations, and current agency procedures; or whether the rule is obsolete.

#### 4.1.2 Program Elements Required for Compatibility

The review team examined the procedures used in the Department's and the Commission's regulatory processes. Both the Department and the Commission receive recommendations on proposed rulemaking from the Texas Radiation Advisory Board. The Department also coordinates its rulemaking through the State Health Services Counsel. At the time of the review, the Department was in the process of standardizing its policies and procedures for rulemaking for all programs within the Department. Some rulemakings involve public meetings and both agencies' rulemaking processes provide an opportunity for public/stakeholder comment on proposed regulations. The Department and the Commission provide NRC any proposed rules for a compatibility review.

The Department's rulemaking process often proposes and adopts rules in regulatory packages that are different than NRC's Review Summary Sheets for Regulation Amendments (also known as RATS Identification). This results in individual portions of RATS Identification sheets being promulgated and adopted by the Department at different times. In addition, the Department often combines portions of RATS Identification sheets into one rulemaking package.

During 2007, the Department's facility was impacted by a flood that inadvertently prevented some final rule packages from being submitted to NRC for review. These final packages were sent to NRC for review and returned to the Department on January 10, 2010. Some of the rules were returned with comments. The Department had also previously sent proposed rules to



NRC, several of which were returned to the Department with comments. Additionally, the Department's reconciliation of NRC comments related to other rules is currently in the rulemaking process. The reconciliation includes all or portions of the following regulation amendments:

- "Medical Use of Byproduct Material," 10 CFR Parts 20, 32, and 35 amendment (67 FR 20249), that was due for Agreement State adoption by October 24, 2005.
- "Medical Use of Byproduct Material - Recognition of Specialty Boards," 10 CFR Part 35 amendment (70 FR 16336), that was due for Agreement State adoption by April 29, 2008.
- "Minor Amendments," 10 CFR Parts 20, 30, 32, 35, 40, and 70 amendment (71 FR 15005), that was due for Agreement State adoption by March 27, 2009.

The Department does not have any proposed regulations that are overdue for adoption that have not already been addressed. The review team reminded the Department that there is one pending regulatory package that is due for State adoption during 2010. The Department needs to address the following amendment:

- "Medical Use of Byproduct Material-Minor Corrections and Clarifications," 10 CFR Parts 32 and 35 amendment (72 FR 45147 and 72 FR 54207), that is due for Agreement State adoption by October 29, 2010.

During the review period, the Commission sent several final rule packages to NRC for review and comment. Several of these packages were submitted to NRC for review as a result of the transfer of jurisdictional authority over of certain activities from the Department. All but one of the final packages was returned by NRC without comments. The one final regulatory package returned by NRC with comments was:

- "Radiological Criteria for License Termination of Uranium Recovery Facilities," 10 CFR Part 40 amendment (64 FR 17506), that was due for Agreement State adoption by June 11, 2002.

The Commission has one regulatory package that is overdue. The RATS Identification for the regulatory package addresses rules that pertain to both the Department and the Commission. The Department has submitted their rules to NRC and they were returned to the Department with comments. The Commission still needs to address the rules that pertain to the Commission. The Commission representatives indicated that they will be processing a rulemaking package beginning in fall 2010. This rulemaking will address other pending rules and will also address any changes to the rules necessary as part of the overdue regulatory package. It is expected that the rulemaking will be completed in 2011. The overdue regulatory package is:

- "Minor Amendments," 10 CFR Parts 20, 30, 32, 35, 40, and 70 amendment (71 FR 15005) that was due for Agreement State adoption by March 27, 2009.

Based on the IMPEP evaluation criteria, the review team recommends that Texas's performance with respect to the indicator, Compatibility Requirements, be found satisfactory.

#### 4.2 Sealed Source and Device Evaluation Program

In reviewing this indicator, the review team used three subelements to evaluate the Department's performance regarding the sealed source and device (SS&D) evaluation program. These subelements were: (1) Technical Staffing and Training; (2) Technical Quality of the Product Evaluation Program; and (3) Evaluation of Defects and Incidents Regarding SS&Ds.

In assessing the Texas SS&D evaluation activities, the review team examined the information provided in response to the IMPEP questionnaire and evaluated the SS&D registry sheets and supporting documents processed during the review period. The team also evaluated SS&D staff training records, certain reported incidents involving products authorized in Texas SS&D sheets, the use of guidance documents and procedures, and interviewed the staff currently conducting SS&D evaluations.

##### 4.2.1 Technical Staffing and Training

SS&D evaluation responsibilities are distributed amongst the license review staff. The staff is divided between industrial SS&D evaluations (Industrial Unit) and medical SS&D evaluations (Medical Unit). The lesser experienced staff member signs evaluations with a more experienced staff member signing in concurrence.

The Department has six reviewers who are qualified to perform safety evaluations of SS&D applications. All have science degrees and have attended NRC's SS&D Workshop. The review team interviewed staff members involved in the reviews and determined that they were familiar with the procedures used in the evaluation of a source/device and had access to applicable reference documents. The SS&D staffing level and education qualifications for the current staff were evaluated and were found adequate.

##### 4.2.2 Technical Quality of the Product Evaluation Program

The review team evaluated 15 of the 57 SS&D evaluation amendments, inactivations, and new registrations, which included custom evaluations issued by the Department during the review period, representing the work of eight SS&D reviewers (six active reviewers and two former reviewers). The Industrial Unit conducted seven new evaluations, issued 24 amendments to an existing registration and inactivated 18 registrations since the last review. The Medical Unit conducted three new evaluations, issued four amendments and inactivated one registration since the last review. The review team noted that the Department completed two SS&D actions involving naturally occurring and accelerator-produced radioactive material on behalf of the State of Wisconsin. These registries were transferred to NRC's jurisdiction during this review as appropriate following the expansion of NRC's regulatory authority granted in the Energy Policy Act of 2005. There were no emerging technology evaluations completed during the review period. The cases selected for review were representative of the Department's licensees and SS&D reviewers throughout the reporting period. The Department stated that they currently manage 297 active SS&D registrations. A list of SS&D casework examined, with the case-specific comments, may be found in Appendix F.

In assessing the Department's SS&D evaluation activities, the review team examined information contained in the Department's response to the IMPEP questionnaire for this indicator and interviewed program staff and managers. The review team confirmed that the Department follows the recommended guidance from NRC's SS&D Workshop; NUREG-1556 Series guidance; applicable and pertinent American National Standards Institute standards; ISO-9001; and Texas Regulatory Guides. The review team verified that these documents were available and used appropriately in performing SS&D reviews.

The Department performed evaluations based on sound conservative assumptions to ensure public health and safety was adequately protected. The Department also sought the input from other licensing jurisdictions that have experience with similar products. Deficiency letters clearly stated regulatory positions and all health and safety issues were addressed. The review team determined that product evaluations were thorough, complete, consistent, and adequately addressed the integrity of the products during use and in the event of accidents.

#### 4.2.3 Evaluation of Defects and Incidents Regarding SS&Ds

Two incidents related to SS&D defects involving sources or devices registered by the State of Texas were reported during the review period. The review team found that the Department's response to incidents was prompt, taking into consideration the health and safety or security significance of the event. Incident procedures are in place should an SS&D-related incident occur. Department managers were aware of the need to look at such incidents as potentially generic in nature with possible wide-ranging effects.

Based on the IMPEP evaluation criteria, the review team recommends that Texas's performance with respect to the indicator, Sealed Source and Device Evaluation Program, be found satisfactory.

#### 4.3 Low-level Radioactive Waste Disposal Program

In reviewing this indicator, the review team used five subelements to evaluate the Commission's performance regarding the low-level radioactive waste (LLRW) disposal program. These subelements were: (1) Technical Staffing and Training, (2) Status of Low-level Radioactive Waste Disposal Inspection, (3) Technical Quality of Inspections, (4) Technical Quality of Licensing Actions, and (5) Technical Quality of Incident and Allegation Activities.

The regulatory responsibility for LLRW disposal resides with the Commission. Since the 2005 IMPEP review, the Commission's Radioactive Material Licensing team has issued two Technical Notices of Deficiencies in response to Waste Control Specialists, LLC (WCS) license application and the initial radioactive materials license to receive, handle, process, store, and dispose of LLRW at a site near Andrews, Texas. The Texas Legislature established the process and timelines for receiving license applications and their review, ending with the issuance of a disposal site license after two rounds of interrogatories.

##### 4.3.1 Technical Staffing and Training

The LLRW program team currently has nine full-time and/or part-time staff members with a staffing effort of 4.9 FTE. The FTE total includes support by the Uranium Technical Assessment

program. Staff supporting the LLRW program include: the Division Director, Radioactive Materials Licensing Manager, Health Physicists, engineers, geologists, and an administrative assistant.

Five primary contractors were also utilized for technical support during the review period. Contractors provided assistance in health physics, nuclear engineering, hydrogeology, geology, geotechnical engineering, financial assurance, ecology, land/mineral rights, law, and civil engineering.

The program shifted from the Department to the Commission in 2007. Several Department staff transferred with the program. Four staff associated with the LLRW program left the program during the review period. The Commission hired eight new staff since the program moved. Two of the newly-hired personnel are health physicists that will serve as resident inspectors at the low-level radioactive waste disposal facility. The newly hired inspectors have Bachelor's degrees in technical fields and health physics backgrounds.

Within the Commission, the licensing group is segregated from the inspectors. Licensing occurs within Office of Permitting & Registration, Radioactive Materials Division, Radioactive Material Licensing Section. The inspectors are located in the Office of Compliance and Enforcement, Homeland Security Program. As identified in earlier sections of this report, organizing by functional groups rather than by program, requires significant emphasis on communication between licensing and inspection staffs to achieve an effective regulatory program.

The review team examined the training records of the staff and found them up to date and complete, although the Commission does not have a documented training and qualification program for staff performing LLRW licensing or inspections. Section managers use professional judgment to certify when staff is "qualified." The review team spoke to the Commission managers about the benefits to the program and staff for a well-documented training program including training journals and sign-off sheets.

The review team determined that the current staff has the right mix of technical expertise and is adequate to maintain the quality and performance of the LLRW program. Through interviews with the professional staff and program managers, combined with an evaluation of training and experience, the review team concluded that the Commission staff is qualified to carry out regulatory duties for licensing and inspecting of the LLRW site. Managers are attempting to build depth in their programs. At the time of the review, only one of the four LLRW inspectors was qualified to inspect all aspects of a LLRW facility. All inspectors had partial qualifications to review certain aspects of a LLRW facility.

#### 4.3.2 Status of Low-level Radioactive Waste Disposal Inspection

Due to the pre-construction status of the disposal site, no license-specific health and safety inspections have taken place since the issuance of the license on September 10, 2009.

LLRW program staff visited the disposal site several times before and since the license was issued. Staff performed pre- and post-licensing soil and water sampling and environmental TLD monitoring. In addition, when health physics investigators inspected the co-located processing and storage facility, they routinely observed activities at the planned LLRW disposal site.

#### 4.3.3 Technical Quality of Inspections

Due to the current status of the LLRW program, the review team had only limited activities to review for this subelement. Inspection modules for use at the LLRW disposal site have not been developed.

On January 13, 2009, two review team members accompanied two Commission inspectors at the WCS facility, as indicated in Appendix C. The inspectors were well prepared and thorough during their limited review of the LLRW disposal site. Under the LLRW license, site security, pre-operational environmental monitoring, and facility posting were observed. Inspectors conducted proper entrance and exit interviews with licensee managers and safety staff. Inspectors also conducted interviews with non-supervisory site personnel during the course of the inspection to ascertain perspective on licensee commitment to safety and training. During the accompaniments, the inspectors demonstrated appropriate performance-based inspection techniques and knowledge of the regulations. The inspections were adequate to assess the safety and radiological hazards at the LLRW disposal facility.

Based on the pre-construction status, the review team did not have any radioactive shipment receipt inspection activities to review for this subelement.

#### 4.3.4 Technical Quality of Licensing Actions

Since the conclusion of the 2005 IMPEP review, staff in the Commission's Radioactive Materials Division have completed a technical review of the WCS license application for receipt of low-level radioactive waste and issued a license to WCS for receipt of low-level radioactive waste limited to Compact waste and Federal Facility waste. The WCS facility holds three licenses from the Commission and one from the Department. A listing of the LLRW licensing casework reviewed by the review team may be found in Appendix D.

Following the completion of the technical review, the Commission conducted a public meeting in Andrews, Texas, and opened a 30-day period to receive public comments and requests for a public hearing on the application. Based on the results of the technical review and public comments, the Commission issued radioactive materials license number R04100 to Waste Control Specialists, LLC on September 10, 2009. The review team concluded that the license conditions were clearly stated and inspectable.

The review team also evaluated Commission staff technical reviews associated with the responses to several pre-construction license conditions submitted by the licensee prior to issuance of the license. At the time of this review, the Commission staff had reviewed several of the licensee's responses to license conditions, and is planning to issue a single response to the licensee's submittals.

The review team examined the financial surety proposed for the facility. Per license condition, discrete financial surety amounts for several categories (e.g., decommissioning, closure, and post-closure) are stated. To evaluate the licensee's proposal, the Commission sought outside assistance from a private contractor, as well as another State agency. Discussions continue with the licensee on this topic. The review team determined that the Commission adequately addressed the financial surety component of the license.

The review team concluded that the Commission's licensing process was thorough, complete, consistent, and of acceptable quality.

#### 4.3.5 Technical Quality of Incident and Allegation Activities

The review team found that the Commission had procedures in place for handling incidents and allegations. The procedures for handling incidents include information on what constitutes an incident, appropriate documentation of the incident, reference to NRC abnormal occurrence criteria, and incident tracking. The procedures for handling allegations include information on protecting the identity of the alleged, documentation of the allegation, and allegation tracking.

During the review period, there were no incidents or allegations pertaining to the LLRW program.

Based on the IMPEP evaluation criteria, the review team recommends that Texas's performance with respect to the indicator, Low-level Radioactive Waste Disposal Program, be found satisfactory.

#### 4.4 Uranium Recovery Program

In reviewing this indicator, the review team used five subelements to evaluate the State's performance regarding the uranium recovery program. These subelements were: (1) Technical Staffing and Training; (2) Status of Uranium Recovery Inspection Program; (3) Technical Quality of Inspections; (4) Technical Quality of Licensing Actions; and (5) Technical Quality of Incident and Allegation Activities.

The Texas uranium recovery program has undergone inter-agency jurisdictional changes since the 2005 IMPEP review. In 2005, the Department had jurisdiction for the licensing, inspection, and enforcement actions for the above ground processes at licensed sites, including the review of the design, construction, operation, record keeping, maintenance, decommissioning, decontamination, and surface reclamation. The Commission had jurisdiction on the permitting, inspection, and enforcement actions for wells permitted by the underground injection control (UIC) program, including wellhead assemblies and groundwater monitoring requirements. Both agencies were responsible for the review, permitting, licensing, inspection, and enforcement activities for fluid holding ponds.

As of July 1, 2007, the regulatory jurisdiction of the uranium recovery program was transferred to the Radioactive Material Division in the Commission. In 2008, the Commission codified rules for radiological materials licensing, and the Department redacted it rules. In 2009, the Commission further reorganized such that (a) inspections for uranium recovery program licenses and UIC permits were performed by personnel in the Homeland Security Program (under a separate office at the Commission) and (b) the UIC Permits team was moved from another section within the Office of Permitting & Registration to the Radioactive Material Division.

At the time of this IMPEP review, the Texas uranium recovery program consists of three conventional mill licenses (three sites currently under decommissioning and currently undergoing groundwater assessments), five in-situ recovery licenses (two licensees in

decommissioning status, one licensee in “standby” status, one licensee in active production, and one licensee newly approved but not in operation), three in-situ recovery applications for new facilities, and one “reclamation” licensee to administer cleanup of vicinity properties abutting an in-situ recovery licensee that had been revoked by the Department.

#### 4.4.1 Technical Staffing and Training

In reviewing this subelement, the review team considered staffing level, technical qualifications of the staff, staff training, and staff turnover.

The duties and responsibilities for the Texas uranium recovery program are assigned to staff in two sections within the Radioactive Materials Division and one section in the Homeland Security Program. Radioactive Materials Division staff members are responsible for licensing actions associated with source material licenses and for permitting of the injection wells, requirements for exempt aquifers, and groundwater restoration. Homeland Security Program staff members are responsible for routine inspections of facilities that have a uranium recovery program license.

The Radioactive Materials Division staffing level is currently at 30 persons with various degrees of involvement in the uranium recovery program. Staffing levels have remained consistent, with only three staff members involved in the uranium recovery program leaving the Division during the review period. The staff has expertise in various technical disciplines including health physics, geology, hydrology, and engineering. A majority of the staff has a professional registration and/or an advanced degree.

The staffing levels in the Homeland Security Program dedicated to the uranium recovery program consist of three persons (including the manager); only one staff member is fully qualified for inspections under the program. The staffing levels and their duties at the Homeland Security Program have been consistent throughout the IMPEP review period. The staff has the experience, education, and training to adequately perform uranium recovery inspections.

The review team examined staff training records as well as interviewed various staff members regarding training efforts. Training for the staff is hampered somewhat by the agency-wide restriction on out-of-state travel. This restriction is mitigated by staff attending NRC-sponsored classes and the Commission providing in-house training by outside experts. During 2009, the Commission has provided nine in-house training courses and is proposing to send 12 personnel to NRC-sponsored training courses during the upcoming fiscal year.

The review team determined that the staffing levels, staff qualifications, and training levels for the uranium recovery program are adequate.

#### 4.4.2 Status of Uranium Recovery Inspection Program

In reviewing this subelement, the review team evaluated the inspection frequency for uranium recovery licensees and the timeliness of inspection finding communications to the licensees. The review team's evaluation is based on Texas's response to the questionnaire relative to this

indicator, the uranium recovery inspection schedule, selected inspection casework files, and interviews with inspection staff and managers.

During the review period, the Commission performed 48 license inspections at 7 active licenses: 3 conventional mills in decommissioning, 2 in-situ recovery licenses in decommissioning, 1 active but non-production in-situ recovery license, and 1 active in-situ recovery license. Inspections were performed in accordance with IMC 2801, "Uranium Mill and 11e.(2) Byproduct Material Disposal Site and Facility Inspection Program," requirements.

The Texas procedures require that the inspection findings be communicated to a licensee during exit meeting at the end of an inspection. A written inspection report is not submitted to the licensee, unless the licensee specifically requests a copy.

#### 4.4.3 Technical Quality of Inspections

In reviewing this subelement, the review team examined inspection reports for five inspections conducted by the Commission during the review period and accompanied inspectors on inspections at two licensed facilities. The cases selected for review represented a range of uranium recovery licensing activities in different stages of operation. The review team interviewed inspectors and managers to assess the adequacy of their preparation for the inspections, guidance and/or protocols for inspection procedures, the depth and content of the actual inspections, and the appropriateness of inspection findings. The uranium recovery program inspection files evaluated by the review team are listed in Appendix C.

The inspector accompaniments and casework reviews confirmed that Commission inspections were thorough, included operational and record reviews, and violations were communicated by the inspector to the licensee during the inspection and exit interviews. The inspectors focused on interviews with licensee personnel to ensure that the work force was adequately trained and knowledgeable of the existing safety procedures, that the procedures were being followed, and that the worker's and public health and safety were properly monitored. The record review concentrated on worker's health and health physics monitoring; however environmental monitoring record review was not as in-depth. Appropriate enforcement actions were taken given the scope of violations noted in the inspection reports.

#### 4.4.4 Technical Quality of Licensing Actions

For this subelement, the review team examined files and associated documentation related to licensing of in-situ and conventional mill facilities, license amendment files, and other licensing documentation. Appendix D lists the licensing files reviewed.

For the conventional mills, the licensing actions during the review period consisted of license renewal, annual financial assurance updates, compliance monitoring, and post-decommissioning monitoring for groundwater compliance. For in-situ recovery facilities, the licensing actions during the review period consisted of reviews of new applications, license renewals, license amendments, annual financial updates, decommissioning plans, and project area authorizations. Based on the casework evaluated, the review team concluded that the licensing actions were of high quality and consistent with Commission procedures, State regulations, and good health physics practices.



#### 4.4.5 Technical Quality of Incident and Allegation Activities

For this subelement, the review team examined files and associated documentation related to incident and allegation activities, response timeliness, and inspection reports, and interviewed the inspection personnel involved with incident and allegation activities.

The review team evaluated the Commission's response to two incidents and three allegations (complaints) regarding the uranium recovery program. A listing of the incident casework examined can be found in Appendix E.

The State's investigations were thorough and results of the allegation investigations were discussed with the originating complainant. Appropriate enforcement actions were taken given the scope of the violations noted. The review team discussed with Commission staff the importance of documentation of all investigations. The Commission is developing a database designed for agency-wide tracking of incidents, complaints, and enforcement actions.

Based on the IMPEP evaluation criteria, the review team recommends that Texas's performance with respect to the indicator, Uranium Recovery Program, be found satisfactory.

#### 5.0 SUMMARY

As noted in Sections 3.0 and 4.0, the review team found Texas's performance to be satisfactory for all nine performance indicators. The review team kept open one performance recommendation from a previous review. Accordingly, the review team recommends that the Texas Agreement State Program be found adequate to protect public health and safety and compatible with NRC's program. Based on the results of the current IMPEP review, the review team recommends that the next full IMPEP review take place in approximately 4 years.

Below is the open recommendation, as mentioned in an earlier section of the report, for evaluation and implementation by the State:

The review team recommends the State develop and implement an inspection program to verify that the QA/QC requirements in the SS&D Registry sheets are being implemented by the manufacturer. (Section 4.2.2) (Open recommendation from the 2005 IMPEP report)

## LIST OF APPENDIXES AND ATTACHMENTS

Appendix A	IMPEP Review Team Members
Appendix B	Texas Organization Charts
Appendix C	Inspection Casework Reviews
Appendix D	License Casework Reviews
Appendix E	Incident Casework Reviews
Appendix F	Sealed Source and Device Casework Reviews
Attachments	April 14, 2010 Letter from Kathryn Perkins Texas Department of State Health Services' Response to the Draft Report
	April 14, 2010 Letter from Mark Vickery Texas Commission on Environmental Quality's Response to the Draft Report

## APPENDIX A

### IMPEP REVIEW TEAM MEMBERS

<b>Name</b>	<b>Area of Responsibility</b>
James Lynch, Region III	Team Leader Technical Staffing and Training Inspector Accompaniments
Janine Katanic, FSME	Assistant Team Leader Technical Quality of Incident and Allegation Activities Compatibility Requirements Inspector Accompaniments
George Johns, Minnesota	Status of Materials Inspection Program Technical Quality of Inspections
Rachel Browder, Region IV	Technical Quality of Licensing Actions Compatibility Requirements
Sandra Kessinger, Illinois	Sealed Source and Device Evaluation Program
Earl Fordham, Washington	Low-level Radioactive Waste Disposal Program Inspector Accompaniments
Christopher Grossman, FSME	Low-level Radioactive Waste Disposal Program
John Saxton, FSME	Uranium Recovery Program Inspector Accompaniments

APPENDIX B

TEXAS ORGANIZATION CHARTS

ADAMS ACCESSION NO.: ML100670214

## APPENDIX C

### INSPECTION CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS ONLY.

#### Texas Department of State Health Services

File No.: 1

Licensee: Scott & White Memorial Hospital  
Inspection Type: Routine, Announced  
Inspection Date: 6/1/09

License No.: L00331  
Priority: 2  
Inspector: LC

File No.: 2

Licensee: Scott & White Memorial Hospital  
Inspection Type: Routine, Announced  
Inspection Date: 6/2/09

License No.: L00331  
Priority: 2  
Inspector: LC

File No.: 3

Licensee: Scott & White Memorial Hospital  
Inspection Type: Routine, Announced  
Inspection Date: 6/11/09

License No.: L00331  
Priority: 2  
Inspector: LC

File No.: 4

Licensee: Scott & White Memorial Hospital  
Inspection Type: Special, Announced  
Inspection Date: 6/11/09

License No.: L00331  
Priority: 2  
Inspector: LC

Comment:

The Department conducted the initial special inspection 259 days overdue.

File No.: 5

Licensee: Southwestern Foundation  
Inspection Type: Routine, Announced  
Inspection Date: 7/9/09

License No.: L00468  
Priority: 2  
Inspector: RW

Comment:

The Department conducted the inspection 289 days overdue.

File No.: 6

Licensee: Memorial Hermann Hospital System, LLC  
Inspection Type: Routine, Announced  
Inspection Date: 8/19/08

License No.: L00650  
Priority: 2  
Inspector: LC

Comment:

The Department conducted the inspection 144 days overdue.

File No.: 7

Licensee: Memorial Hermann Hospital System, LLC  
Inspection Type: Initial Special, Announced  
Inspection Date: 9/15/08

License No.: L00650  
Priority: 2  
Inspector: LC

File No.: 8

Licensee: Baptist St. Anthony's Health System  
Inspection Type: Routine, Announced  
Inspection Date: 2/6/07

License No.: L01259  
Priority: 2  
Inspector: ERS

Comment:

The Department conducted the inspection 101 days overdue.

File No.: 9

Licensee: Baptist St. Anthony's Health System  
Inspection Type: Routine, Announced  
Inspection Date: 6/10/09

License No.: L01259  
Priority: 2  
Inspector: ERS

File No.: 10

Licensee: The University of Texas Health Science  
Center at San Antonio  
Inspection Type: Routine, Announced  
Inspection Date: 3/28/08

License No.: L01279  
Priority: 2  
Inspector: RW

Comment:

The Department issued the inspection report 110 days overdue.

File No.: 11

Licensee: The University of Texas Health Science  
Center at San Antonio  
Inspection Type: Routine, Announced  
Inspection Date: 3/26/08

License No.: L01279  
Priority: 2  
Inspector: RW

File No.: 12

Licensee: The University of Texas Health Science  
Center at San Antonio  
Inspection Type: Routine, Announced  
Inspection Date: 3/25/08

License No.: L01279  
Priority: 2  
Inspector: RW

File No.: 13

Licensee: The University of Texas Health Science  
Center at San Antonio  
Inspection Type: Routine, Announced  
Inspection Date: 3/25/08

License No.: L01279  
Priority: 2  
Inspector: RW

File No.: 14

Licensee: The University of Texas Health Science  
Center at San Antonio

License No.: L01279

Inspection Type: Routine, Announced

Priority: 2

Inspection Date: 3/27/08

Inspector: RW

Comment:

The Department issued the inspection report 84 days overdue.

File No.: 15

Licensee: The University of Texas Health Science  
Center at San Antonio

License No.: L01279

Inspection Type: Special, Announced

Priority: 2

Inspection Date: 3/28/08

Inspector: RW

Comment:

The Department issued the inspection report 91 days overdue.

File No.: 16

Licensee: The University of Texas Health Science  
Center at San Antonio

License No.: L01279

Inspection Type: Special, Announced

Priority: 2

Inspection Date: 3/26/08

Inspector: RW

Comment:

The Department issued the inspection report 24 days overdue.

File No.: 17

Licensee: The University of Texas Health Science  
Center at San Antonio

License No.: L01279

Inspection Type: Special, Announced

Priority: 2

Inspection Date: 3/25/08

Inspector: RW

File No.: 18

Licensee: The University of Texas Health Science  
Center at San Antonio

License No.: L01279

Inspection Type: Special, Announced

Priority: 2

Inspection Date: 3/27/08

Inspector: RW

Comment:

The Department issued the inspection report 44 days overdue.

File No.: 19

Licensee: Austin Texas Radiation Oncology Group, PA

License No.: L01761

Inspection Type: Routine, Announced

Priority: 2

Inspection Date: 7/15/09

Inspector: LC

File No.: 20

Licensee: Austin Texas Radiation Oncology Group, PA  
Inspection Type: Special, Announced  
Inspection Date: 7/15/09

License No.: L01761  
Priority: 2  
Inspector: LC

File No.: 21

Licensee: Austin Texas Radiation Oncology Group, PA  
Inspection Type: Routine, Announced  
Inspection Date: 7/15/09

License No.: L01761  
Priority: 2  
Inspector: LC

File No.: 22

Licensee: Texas Tech University Health Sciences Center  
Inspection Type: Routine, Announced  
Inspection Date: 8/5/08

License No.: L01869  
Priority: 2  
Inspector: WK

Comment:

The Department conducted the inspection 370 days overdue.

File No.: 23

Licensee: Northwest Texas Healthcare System, Inc.  
Inspection Type: Routine, Announced  
Inspection Date: 6/11/09

License No.: L02054  
Priority: 2  
Inspector: ERS

Comment:

The Department conducted the inspection 129 days overdue.

File No.: 24

Licensee: Gray Wireline Services  
Inspection Type: Routine, Announced  
Inspection Date: 12/28/10

License No.: L03541  
Priority: 3  
Inspector: ERS

File No.: 25

Licensee: Cardinal Health  
Inspection Type: Routine, Announced  
Inspection Date: 8/14/07

License No.: L04043  
Priority: 2  
Inspector: SF

Comment:

The Department conducted the inspection 82 days overdue.

File No.: 26

Licensee: Titan Specialties  
Inspection Type: Routine, Announced  
Inspection Date: 12/2/08

License No.: L04920  
Priority: 2  
Inspector: ES

Comment:

The Department issued the inspection report 669 days overdue.



File No.: 27

Licensee: TAPCO International, Inc.  
Inspection Type: Routine, Announced  
Inspection Date: 12/14/09

License No.: L04990  
Priority: 2  
Inspector: JS

File No.: 28

Licensee: TAPCO International, Inc.  
Inspection Type: Special, Announced  
Inspection Date: 12/14/09

License No.: L04990  
Priority: 2  
Inspector: JS

File No.: 29

Licensee: ROSA of the South Plains  
Inspection Type: Routine, Announced  
Inspection Date: 1/12/10

License No.: L05484  
Priority: 2  
Inspector: ES

File No.: 30

Licensee: University of Texas Southwestern  
Medical Center at Dallas  
Inspection Type: Initial, Announced  
Inspection Date: 2/22/07

License No.: L05947  
Priority: 2  
Inspector: SF

Comment:

The Department conducted the inspection 117 days overdue.

File No.: 31

Licensee: University of Texas Southwestern  
Medical Center at Dallas  
Inspection Type: Initial, Announced  
Inspection Date: 4/24/09

License No.: L05947  
Priority: 2  
Inspector: SF

File No.: 32

Licensee: Garland Cardiac Imaging  
Inspection Type: Initial, Announced  
Inspection Date: 1/12/07

License No.: L05948  
Priority: 5  
Inspector: SP

Comment:

The Department conducted the inspection 65 days overdue.

File No.: 33

Licensee: Texas Coast Cardiovascular, LLC  
Inspection Type: Routine, Announced  
Inspection Date: 1/14/08

License No.: L05983  
Priority: 5  
Inspector: HD

Comment:

The Department conducted the inspection 68 days overdue.

File No.: 34

Licensee: Grace Clinic of Lubbock  
Inspection Type: Routine, Announced  
Inspection Date: 1/12/07

License No.: L06040  
Priority: 5  
Inspector: SP

Comment:

The Department conducted the inspection 45 days overdue.

File No.: 35

Licensee: Waste Control Specialists  
Inspection Type: Initial, Announced  
Inspection Date: 7/18/08

License No.: L06153  
Priority: 5  
Inspectors: WK

File No.: 36

Licensee: Waste Control Specialists  
Inspection Type: Initial Special, Announced  
Inspection Date: 7/18/08

License No.: L06153  
Priority: 5  
Inspector: WK

File No.: 37

Licensee: Texas Department of State Health Services  
Inspection Type: Routine, Announced  
Inspection Date: 6/1/09

License No.: L05865  
Priority: 5  
Inspector: JH

File No.: 38

Licensee: Texas Department of State Health Services  
Inspection Type: Special, Announced  
Inspection Date: 6/2/09

License No.: L05865  
Priority: 5  
Inspector: JH

File No.: 39

Licensee: National Oilwell Varco, LP  
Inspection Type: Routine, Announced  
Inspection Date: 7/30/08

License No.: L06094  
Priority: 2  
Inspector: JH

File No.: 40

Licensee: Rio Grande Resources Corporation  
Inspection Type: Routine, Announced  
Inspection Date: 8/20/09

License No.: L02402  
Priority: 1  
Inspector: MA

Texas Commission on Environmental Quality

File No.: 41

Licensee: Mesteña Uranium, LLC

Type of Action: UIC Annual Inspection  
Date of Action: 5/14/06

License No.: R05360  
(UIC Permit UR03060)  
Priority: 1  
Reviewer: MA

File No.: 42

Licensee: Mesteña Uranium, LLC

Type of Action: UIC Annual Inspection

Date of Action: 4/19/07

License No.: R05360  
(UIC Permit UR03060)

Priority: 1

Reviewer: MA

File No.: 43

Licensee: Mesteña Uranium, LLC

Type of Action: UIC Annual Inspection

Date of Action: 4/3/08

License No.: R05360  
(UIC Permit UR03060)

Priority: 1

Reviewer: MA

File No.: 44

Licensee: Mesteña Uranium, LLC

Type of Action: UIC Annual Inspection

Date of Action: 3/11/09

License No.: R05360  
(UIC Permit UR03060)

Priority: 1

Reviewer: MA

File No.: 45

Licensee: Mesteña Uranium, LLC

Type of Action: Annual Inspection

Date of Action: 8/28/08

License No.: R05360

Priority: 1

Reviewer: SS

#### INSPECTOR ACCOMPANIMENTS

The following inspector accompaniments were performed prior to the on-site IMPEP review:

##### Texas Department of State Health Services

Accompaniment No.: 1

Licensee: TAPCO International, Inc.

Inspection Type: Special, Announced

Inspection Date: 12/14/09

License No.: L04990

Priority: 1

Inspector: JS

Comment:

The inspector did not review the inspection findings from the previous special inspection.

Accompaniment No.: 2

Licensee: South Texas Nuclear Pharmacy

Inspection Type: Routine, Announced

Inspection Date: 12/15/09

License No.: L05304

Priority: 2

Inspector: KD

Accompaniment No.: 3

Licensee: Gray Wireline Service, Inc.

Inspection Type: Routine, Announced

Inspection Date: 12/28/09

License No.: L03541

Priority: 3

Inspector: ERS

Accompaniment No.: 4

Licensee: St. David's Healthcare Partnership  
Inspection Type: Special, Announced  
Inspection Date: 12/29/09

License No.: L05856  
Priority: 2  
Inspector: ENS

Accompaniment No.: 5  
Licensee: Spectro Analytical Instruments, Inc.  
Inspection Type: Routine, Unannounced  
Inspection Date: 12/30/09

License No.: L02788  
Priority: 2  
Inspector: LC

Accompaniment No.: 6  
Licensee: Shannon Medical Center  
Inspection Type: Routine, Announced  
Inspection Date: 1/11/10

License No.: L02174  
Priority: 3  
Inspector: WK

Accompaniment No.: 7  
Licensee: ROSA of the South Plains, LLP  
Inspection Type: Routine, Announced  
Inspection Date: 1/12/10

License No.: L05484  
Priority: 2  
Inspector: ES

Comment:

The inspector reviewed only one patient therapy file.

Accompaniment No.: 8  
Licensee: IRIS NDT, Inc.  
Inspection Type: Special, Announced  
Inspection Date: 1/29/10

License No.: L04769  
Priority: 1  
Inspector: HA

Texas Commission on Environmental Quality

Accompaniment No.: 9  
Licensee: Rio Grande Resources Corporation  
Inspection Type: Routine, Announced  
Inspection Date: 1/25/10

License No.: L02402  
Priority: 3  
Inspectors: MA, SS

Accompaniment No.: 10  
Licensee: Waste Control Specialists, LLC  
Inspection Type: Routine, Announced  
Inspection Date: 1/13/10

License Nos.: R04100, R04971, R05807  
Priority: 1  
Inspectors: MA, SS

Accompaniment No.: 11  
Licensee: Mesteña Uranium, LLC  
Inspection Type: Routine, Announced  
Inspection Dates: 1/26-28/10

License No.: R05360  
Priority: N/A  
Inspectors: MA, SS

Comment:

The inspector performed only a limited review of environmental monitoring records associated with the site.

## APPENDIX D

### LICENSE CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS ONLY.

#### Texas Department of State Health Services

File No.: 1 Licensee: Solutia, Inc. Type of Action: Renewal Date Issued: 9/9/08	License No.: L00219 Amendment No.: 84 License Reviewer: DG
File No.: 2 Licensee: Southwest Research Institute Type of Action: Amendment Date Issued: 5/14/09	License No.: L00775 Amendment No.: 79 License Reviewer: DF
File No.: 3 Licensee: National Oil Well Varco, LP Type of Action: New Date Issued: 7/23/07	License No.: L06094 Amendment No.: 00 License Reviewer: DF
File No.: 4 Licensee: Supply Chain Solutions, LTD Type of Action: New Date Issued: 7/30/09	License No.: L06253 Amendment No.: 00 License Reviewer: DF
File No.: 5 Licensee: Supply Chain Solutions, LTD Type of Action: Amendment Date Issued: 9/28/09	License No.: L06253 Amendment No.: 01 License Reviewer: DF
File No.: 6 Licensee: Memorial Hermann Hospital System, Inc. Type of Action: Renewal Date Issued: 2/27/07	License No.: L00650 Amendment No.: 81 License Reviewer: HW
File No.: 7 Licensee: Sabia, Inc. Type of Action: New Date Issued: 2/5/08	License No.: L06141 Amendment No.: 00 License Reviewer: DF
File No.: 8 Licensee: Sabia, Inc. Type of Action: Termination Date Issued: 10/15/09	License No.: L06141 Amendment No.: 02 License Reviewer: DF

File No.: 9

Licensee: BetaBatt, Inc.

Type of Action: New

Date Issued: 4/27/06

License No.: L05961

Amendment No.: 00

License Reviewer: DF

File No.: 10

Licensee: BetaBatt, Inc.

Type of Action: Amendment

Date Issued: 8/25/08

License No.: L05961

Amendment No.: 03

License Reviewer: DF

File No.: 11

Licensee: Advanced Inspection Technologies

Type of Action: New

Date Issued: 4/1/09

License No.: L06228

Amendment No.: 00

License Reviewer: RF

File No.: 12

Licensee: Eagle NDT, LLC

Type of Action: New

Date Issued: 7/3/08

License No.: L06176

Amendment No.: 00

License Reviewer: JK

File No.: 13

Licensee: Eagle NDT, LLC

Type of Action: Termination Site

Date Issued: 2/14/09

License No.: L06176

Amendment No.: 13

License Reviewer: KS

File No.: 14

Licensee: University of Texas, MD Anderson  
Cancer Center

Type of Action: Amendment

Date Issued: 1/28/10

License No.: L06227

Amendment No.: 10

License Reviewer: JS

File No.: 15

Licensee: University of Texas, MD Anderson  
Cancer Center

Type of Action: Renewal

Date Issued: 4/15/09

License No.: L06227

Amendment No.: 116

License Reviewer: JK

File No.: 16

Licensee: Texas Oncology

Type of Action: New

Date Issued: 12/19/08

License No.: L06206

Amendment No.: 00

License Reviewer: FT

Comment:

The license reviewer authorized an individual on the license who was not qualified for one of the two approved modalities.

File No.: 17

Licensee: Medi-Physics dba GE Healthcare  
Type of Action: Amendment  
Date Issued: 9/19/07

License No.: L04764  
Amendment No.: 34  
License Reviewer: SU

File No.: 18

Licensee: El-Paso Animal Emergency Center  
Type of Action: New  
Date Issued: 9/11/09

License No.: L06263  
Amendment No.: 00  
License Reviewer: PS

File No.: 19

Licensee: Cardinal Health 200, Inc.  
Type of Action: Amendment  
Date Issued: 2/13/07

License No.: L02407  
Amendment No.: 31  
License Reviewer: DF

File No.: 20

Licensee: University of North Texas Risk  
Management Services  
Type of Action: Amendment  
Date Issued: 8/20/08

License No.: L00101  
Amendment No.: 83  
License Reviewer: FT

File No.: 21

Licensee: University of North Texas Risk  
Management Services  
Type of Action: Amendment  
Date Issued: 2/9/10

License No.: L00101  
Amendment No.: 86  
License Reviewer: FT

File No.: 22

Licensee: Marco Inspection Services LLC  
Type of Action: Amendment  
Date Issued: 10/21/09

License No.: L06027  
Amendment No.: 25  
License Reviewer: KS

File No.: 23

Licensee: Marco Inspection Services LLC  
Type of Action: Amendment  
Date Issued: 12/2/08

License No.: L06027  
Amendment No.: 18  
License Reviewer: RF

File No.: 24

Licensee: Memorial Hermann  
Type of Action: Amendment  
Date Issued: 2/11/10

License No.: L00439  
Amendment No.: 149  
License Reviewer: JS

File No.: 25

Licensee: Memorial Hermann

Type of Action: Amendment

Date Issued: 7/3/09

License No.: L00439

Amendment No.: 143

License Reviewer: FT

Comments:

- a) The license reviewer did not authorize a medical physicist on the license.
- b) The license reviewer failed to require the physical presence of an authorized user during IVB procedures.

File No.: 26

Licensee: Nuclear Scanning Services, Inc.

Type of Action: Amendment

Date Issued: 2/2/10

License No.: L04339

Amendment No.: 22

License Reviewer: DF

File No.: 27

Licensee: Houston Northwest Operating Company, LLC

Type of Action: Amendment

Date Issued: 1/14/10

License No.: L06190

Amendment No.: 05

License Reviewer: TC

File No.: 28

Licensee: Dialog Wireline Services LLC

Type of Action: Amendment

Date Issued: 12/3/09

License No.: L06104

Amendment No.: 04

License Reviewer: KS

File No.: 29

Licensee: Dialog Wireline Services LLC

Type of Action: New

Date Issued: 10/4/07

License No.: L06104

Amendment No.: 00

License Reviewer: AG

File No.: 30

Licensee: Kakivik Asset Management

Type of Action: New

Date Issued: 1/21/09

License No.: L06211

Amendment No.: 00

License Reviewers: KS, JK

File No.: 31

Licensee: Waste Control Specialists, LLC

Type of Action: Amendment

Date Issued: 11/24/09

License No.: L06153

Amendment No.: 03

License Reviewer: KS

File No.: 32

Licensee: Waste Control Specialists, LLC

Type of Action: Amendment

Date Issued: 5/6/08

License No.: L06153

Amendment No.: 01

License Reviewer: AG



File No.: 33

Licensee: Iso Tex Diagnostics, Inc.  
Type of Action: Amendment  
Date Issued: 6/1/09

License No.: L02999  
Amendment No.: 46  
License Reviewer: SU

File No.: 34

Licensee: Frac Tech Services LTD  
Type of Action: New  
Date Issued: 3/26/09

License No.: L06188  
Amendment No.: 00  
License Reviewer: JK

File No.: 35

Licensee: Integrated Production Services, Inc.  
Type of Action: New  
Date Issued: 1/4/07

License No.: L06051  
Amendment No.: 00  
License Reviewer: MD

File No.: 36

Licensee: Express Energy Services  
Type of Action: Termination  
Date Issued: 11/24/09

License No.: L06111  
Amendment No.: 04  
License Reviewer: SG

File No.: 37

Licensee: University of Houston  
Type of Action: Amendment  
Date Issued: 1/22/10

License No.: L01886  
Amendment No.: 63  
License Reviewer: FT

File No.: 38

Licensee: Memorial Hermann Hospital  
System, The Woodlands  
Type of Action: Amendment  
Date Issued: 1/26/10

License No.: L03772  
Amendment No.: 75  
License Reviewer: FT

Texas Commission on Environmental Quality

File No.: 39

Licensee: Waste Control Specialists, LLC  
Type of Action: New  
Date Issued: 9/10/09

License No.: R04100  
Amendment No.: 0  
License Reviewers: RMD Team

File No.: 40

Licensee: Waste Control Specialists, LLC  
Type of Action: Amendment  
Date Issued: 1/19/10

License No.: R04100  
Amendment No.: 1  
License Reviewer: BB

File No.: 41

Licensee: Waste Control Specialists, LLC  
Type of Action: Response to Condition  
Date Issued: N/A

License No.: R04100  
License Condition No.: 50A  
License Reviewer: AP

File No.: 42

Licensee: Waste Control Specialists, LLC  
Type of Action: Response to Condition  
Date Issued: N/A

License No.: R04100  
License Condition No.: 53D  
License Reviewer: PL

File No.: 43

Licensee: Waste Control Specialists, LLC  
Type of Action: Response to Condition  
Date Issued: N/A

License No.: R04100  
License Condition No.: 50B  
License Reviewers: BB, WS

File No.: 44

Licensee: Rio Grande Resources Corporation  
Type of Action: Routine Monitoring Report  
Date of Action: 1/29/10

License No.: L02402  
Amendment No.: N/A  
License Reviewers: CM, KT

File No.: 45

Licensee: Rio Grande Resources Corporation  
Type of Action: Routine Monitoring Report  
Date of Action: 12/23/09

License No.: L02402  
Amendment No.: N/A  
License Reviewers: CM, KT

File No.: 46

Licensee: Rio Grande Resources Corporation  
Type of Action: Decommissioning Cost Update  
Date of Action: 12/22/09

License No.: L02402  
Amendment No.: N/A  
License Reviewer: LG

File No.: 47

Licensee: Everest Exploration, Inc.  
Type of Action: Amendment  
Date of Action: 4/2/09

License No.: L03626  
Amendment No.: N/A  
License Reviewer: PS

File No.: 48

Licensee: Everest Exploration, Inc.  
Type of Action: Annual Decommissioning Update  
Date of Action: 8/11/08

License No.: L03626  
Amendment No.: N/A  
License Reviewer: LG

File No.: 49

Licensee: Mesteña Uranium, LLC  
Type of Action: Plant Expansion Amendment  
Date of Action: 11/25/08

License No.: R05360  
Amendment No.: N/A  
License Reviewers: LG, BB

File No.: 50

Licensee: Mesteña Uranium, LLC

Type of Action: Restoration Demonstration

Date of Action: 6/5/07

License No.: R05360 (UIC Permit UR03060)

Amendment No.: N/A

License Reviewer: JS

Comment:

The license reviewer did not fully document the technical review which was performed.

File No.: 51

Licensee: South Texas Mining Venture, LLP

Type of Action: Environmental Assessment

Date of Action: 10/14/09

License No.: R06062

Amendment No.: N/A

License Reviewers: Team

## APPENDIX E

### INCIDENT CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS ONLY.

#### Texas Department of State Health Services

File No.: 1

Licensee: Ludlum Measurements, Inc.

Date of Incident: 11/13/08

Investigation Date: 11/13/08

License No.: L01963

NMED No.: 080792

Type of Incident: Contamination

Type of Investigation: Site

File No.: 2

Licensee: QC Laboratories, Inc./Top Dollar Pawn Shop

Dates of Incident: 6/15/06, 11/15/06

Investigation Dates: 6/15/06, 11/15/06

License No.: L04750

NMED No.: 060401

Type of Incident: Lost/stolen material

Type of Investigation: Site

Comment:

The incident investigation involved the loss/theft of the material and the recovery of the material.

File No.: 3

Licensee: Texas DSHS Community Preparedness Section

Date of Incident: 11/28/06

Investigation Date: 11/28/06

License No.: L05865

NMED No.: 060757

Type of Incident: Lost/stolen material

Type of Investigation: Telephone/e-mail

File No.: 4

Licensee: Nuclear Sources and Services, Inc.

Date of Incident: 8/20/09

Investigation Date: 8/28/09

License No.: L02991

NMED No.: 090696

Type of Incident: Contamination

Type of Investigation: Site

File No.: 5

Licensee: Christus Santa Rosa Surgery Center

Date of Incidents: 1/4/06 -8/14/06

Investigation Date: 2/13/07

License No.: L05805

NMED No.: 070092

Type of Incidents: Medical

Type of Investigation: Site

File No.: 6

Licensee: Desert Industrial X-Ray

Date of Incident: 3/5/09

Investigation Date: 3/5/09

License No.: L04590

NMED No.: 090388

Type of Incident: Equipment failure

Type of Investigation: Site

File No.: 7

Licensee: Rone Engineering Services

Date of Incident: 7/30/08

Investigation Date: 7/30/08

License No.: L02356

NMED No.: 080442

Type of Incident: Lost/stolen material

Type of Investigation: Telephone/e-mail

File No.: 8

Licensee: James Hardie Building Products, Inc.

Date of Incident: 10/29/07

Investigation Date: 11/26/07

License No.: G02040

NMED No.: 070735

Type of Incident: Equipment failure

Type of Investigation: Telephone/e-mail

File No.: 9

Licensee: Cardinal Health 200, Inc.

Date of Incident: 3/11/07

Investigation Date: 3/12/07

License No.: L02407

NMED No.: 070236

Type of Incident: Equipment failure

Type of Investigation: Telephone/e-mail

File No.: 10

Licensee: Petrochem Inspection Services

Date of Incident: 5/20/07

Investigation Date: 6/4/07

License No.: L04460

NMED No.: 090438

Type of Incident: Damaged equipment

Type of Investigation: Telephone/e-mail

File No.: 11

Licensee: Physician Reliance, LP

Date of Incident: 8/19/08

Investigation Date: 8/19/08

License No.: L05545

NMED No.: 080490

Type of Incident: Medical

Type of Investigation: Telephone/e-mail

File No.: 12

Licensee: Delek Refining, Ltd.

Date of Incident: 10/28/08

Investigation Date: 12/30/08

License No.: L02289

NMED Log No.: 090001

Type of Incident: Equipment failure

Type of Investigation: Site

File No.: 13

Licensee: Delek Refining, Ltd.

Date of Incident: 11/26/08

Investigation Date: 12/30/08

License No.: L02289

NMED Log No.: 080722

Type of Incident: Equipment failure

Type of Investigation: Site

Texas Commission on Environmental Quality

File No.: 14

Licensee: URI, Inc.

Date of Incident: 11/6/07

Investigation Date: 11/6/07

License No.: L03653

NMED No.: 080140

Type of Incident: Contamination

Type of Investigation: Site

File No.: 15

Licensee: Mesteña Uranium, LLC

Date of Incident: 8/14/09

Investigation Date: 8/14/09

License No.: R05360

NMED No.: N/A

Type of Incident: Contamination

Type of Investigation: Site

## APPENDIX F

### SEALED SOURCE & DEVICE (SS&D) CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS ONLY.

File No.: 1

Registry No.: TX-634-S-109-S

SS&D Type: (H) General Neutron  
Source Applications

Applicant Name: Thermo Fisher Scientific

Type of Action: Amendment

Date Issued: 7/20/07

Reviewers: DF, PM

File No.: 2

Registry No.: TX-634-S-109-S

SS&D Type: (H) General Neutron  
Source Applications

Applicant Name: Thermo Fisher Scientific

Type of Action: Amendment

Date Issued: 2/10/10

Reviewers: JK, RF

Comments:

- a) The reviewers authorized an open-ended provision which could allow unregistered sources to be included in the registry.
- b) The reviewers did not ensure that all sources met the useful life identified in the registry.
- c) The reviewers authorized a capsule model on the source registry that does not exist.
- d) The reviewers required sources to be special form but two of the added sources were not identified as special form.

File No.: 3

Registry No.: TX-634-D-176-B

SS&D Type: (H) General Neutron  
Source Applications

Applicant Name: Thermo Fisher Scientific

Type of Action: New

Date Issued: 7/23/07

Reviewers: DF, MD

File No.: 4

Registry No.: TX-634-D-176-B

SS&D Type: (H) General Neutron  
Source Applications

Applicant Name: Thermo Fisher Scientific

Type of Action: Amendment

Date Issued: 11/6/09

Reviewers: JK, DF

Comment:

The reviewers did not amend the device registry to include the lower ANSI rating that the source registry required.

File No.: 5

Registry No.: TX-634-D-174-B

SS&D Type: (H) General Neutron  
Source Applications

Applicant Name: Thermo Fisher Scientific

Type of Action: Amendment

Date Issued: 7/23/07

Reviewers: DF, PM

Comment:

The reviewers did not amend the device registry to include the lower ANSI rating that the source registry required.

File No.: 6

Registry No.: TX-1300-D-101-S

SS&D Type: (D) Gamma Gauge

Applicant Name: GeoTek Limited

Type of Action: New

Date Issued: 4/2/08

Reviewers: DF, MD

Comment:

The reviewers did not ensure that the foreign manufacturer/distributor had a U.S. radioactive materials license, per Texas regulations, or an import/export license.

File No.: 7

Registry No.: TX-227-D-801 through 810-B

SS&D Type: (U) X-Ray Fluorescence

Applicant Name: Columbia Scientific Industries, Corp.

Type of Action: Inactivation

Date Issued: 10/17/05

Reviewers: DF, PM

Comment:

Registrations TX-227-D-801-B through TX-227-D-810-B are not listed in the NRC database.

File No.: 8

Registry No.: TX-634-D-858-B

SS&D Type: (U) X-Ray Fluorescence

Applicant Name: Thermo MeasureTech

Type of Action: Inactivation

Date Issued: 7/7/06

Reviewers: DF, PM

File No.: 9

Registry No.: TX-1032-D-103-S

SS&D Type: (X) Medical Reference Sources

Applicant Name: GE Medical Systems

Type of Action: Amendment

Date Issued: 11/17/06

Reviewers: SK, DF

File No.: 10

Registry No.: TX-1032-D-104-S

SS&D Type: (X) Medical Reference Sources

Applicant Name: GE Medical Systems

Type of Action: New

Date Issued: 8/1/08

Reviewers: SK, DF



File No.: 11

Registry No.: TX-1176-D-101-B

Applicant Name: Roxar, Inc.

Date Issued: 1/22/10

SS&D Type: (D) Gamma Gauge

Type of Action: Amendment

Reviewers: DF, MD

File No.: 12

Registry No.: TX-634-D-858-B

Applicant Name: Thermo MeasureTech

Date Issued: 7/10/06

SS&D Type: (U) X-Ray Fluorescence

Type of Action: Inactivation

Reviewers: DF, PM

File No.: 13

Registry No.: TX-586-S-110-S

Applicant Name: Schlumberger Technology Corp.

Date Issued: 9/17/09

SS&D Type: (F) Well Logging

Type of Action: Amendment

Reviewers: JK, RF

File No.: 14

Registry No.: TX-1297-D-101-S

Applicant Name: Hotwell, US, Ltd.

Date Issued: 8/25/09

SS&D Type: (F) Well Logging

Type of Action: Amendment

Reviewers: SG, RF

File No.: 15

Registry No.: TX-734-D-101-S

Applicant Name: Tracerco

Date Issued: 7/28/09

SS&D Type: (D) Gamma Gauge

Type of Action: Amendment

Reviewers: SG, RF

## ATTACHMENTS

April 14, 2010 Letter from Kathryn Perkins  
Texas Department of State Health Services'  
Response to the Draft Report

ADAMS Accession No.: ML101160054

April 14, 2010 Letter from Mark Vickery  
Texas Commission on Environmental Quality's  
Response to the Draft Report

ADAMS Accession No.: ML101100576

**Agenda for Management Review Board Meeting  
May 19, 2010, 10:00 a.m. - 11:30 a.m. (EDT), TWFN-2-B5**

1. Announcement of public meeting, request for members of the public to indicate they are participating and their affiliation.
2. MRB Chair convenes meeting. Introduction of MRB members, review team members, State representatives, and other representatives participating remotely.
3. Consideration of the Texas IMPEP Report.
  - A. Presentation of Findings Regarding Texas's Program and Discussion.
    - Technical Staffing and Training
    - Status of Materials Inspection Program
    - Technical Quality of Inspections
    - Technical Quality of Licensing Actions
    - Technical Quality of Incident and Allegation Activities
    - Compatibility Requirements
    - Sealed Source and Device Evaluation Program
    - Low-level Radioactive Waste Disposal Program
    - Uranium Recovery Program
  - B. IMPEP Team Recommendations.
    - Recommendation for Adequacy and Compatibility Ratings
    - Recommendation for Next IMPEP Review
  - C. MRB Consultation/Comments on Issuance of Report.
4. Request for comments from Texas representatives, OAS Liaison, and State IMPEP team members.
5. Adjournment.

Invitees:	Martin Virgilio, DEDMRT	Jim Lynch, Region III
	Bradley Jones, OGC	Janine Katanic, FSME
	Charles Miller, FSME	Rachel Browder, Region IV
	Marc Dapas, Region I	Christopher Grossman, FSME
	Robert Gallagher, MA	John Saxton, FSME
	Richard Ratliff, TX	Sandra Kessinger, IL
	Susan Jablonski, TX	Earl Fordham, WA
	Robert Lewis, FSME	George Johns, MN
	Terrence Reis, FSME	Aaron McCraw, FSME
	Duncan White, FSME	Michelle Beardsley, FSME
	Alan Frazier, OEDO	Karen Meyer, FSME