August 14, 2012

Cheryl Nolan
Assistant Secretary
Department Environmental Quality
Office of Environmental Compliance
P.O. Box 4312
Baton Rouge, LA 70821

Dear Ms. Nolan:

On July 12, 2012, the Management Review Board (MRB) met to consider the proposed final Integrated Materials Performance Evaluation Program (IMPEP) report on the Louisiana Agreement State Program. The MRB found the Louisiana Agreement State Program adequate to protect public health and safety and compatible with the Nuclear Regulatory Commission's program.

Section 5.0, page 16 of the enclosed final report contains a summary of the IMPEP team's findings. Based on the results of the current IMPEP review, the next full review of the Louisiana Agreement State Program will take place in approximately 4 years, with a periodic meeting held in 18 to 24 months. The corrective actions taken to address the open recommendations will be reviewed during the periodic meeting and subsequently verified for closure at the next IMPEP. No additional written response is required at this time to address the open recommendations.

I appreciate the courtesy and cooperation extended to the IMPEP team during the review. I also wish to acknowledge your continued support for the Agreement State Program. I look forward to our agencies continuing to work cooperatively in the future.

Sincerely,

/RA/

Michael F. Weber
Deputy Executive Director for Materials, Waste,
Research, State, Tribal and Compliance Programs
Office of the Executive Director for Operations

Enclosure:
Louisiana Final IMPEP Report

cc w/ encl: Tim Knight, Administrator
Department of Environmental Quality

Earl Fordham
Organization of Agreement States
Liaison to the MRB

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF THE LOUISIANA AGREEMENT STATE PROGRAM

APRIL 23-27, 2012

FINAL REPORT

Enclosure

EXECUTIVE SUMMARY

This report presents the results of the Integrated Materials Performance Evaluation Program (IMPEP) review of the Louisiana Agreement State Program. The review was conducted during the period of April 23-27, 2012, by a team composed of technical staff members from the U. S. Nuclear Regulatory Commission (NRC) and the State of Florida.

Based on the results of this review, Louisiana's performance was found satisfactory for the indicators Technical Staffing and Training, Status of Materials Inspection Program, Technical Quality of Inspections, Technical Quality of Licensing Actions, and Technical Quality of Incident and Allegation Activities. Louisiana's performance was found to be satisfactory, but needs improvement for the Compatibility Requirements, and Sealed Source and Device Evaluation Program performance indicators.

The review team made two recommendations: (1) the State should review its processes and develop and implement appropriate actions to ensure that products issued are of high technical quality and meet the standard expectations, and (2) the State should locate and make readily accessible all of the active sealed source and device registration commitments. Also, a recommendation from the 2008 IMPEP review remains open based on similar issues identified in the Sealed Source and Device Evaluation Program indicator.

Accordingly, the review team recommended, and the Management Review Board (MRB) agreed, that the Louisiana Agreement State Program is adequate to protect public health and safety and is compatible with NRC's program. The review team recommended, and the MRB agreed, that the next IMPEP review will take place in approximately 4 years and that a periodic meeting held in 18 to 24 months.

1.0 INTRODUCTION

This report presents the results of the review of the Louisiana Agreement State Program. The review was conducted during the period of April 23-27, 2012, by a review team composed of technical staff members from the NRC and the State of Florida. 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 NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)," dated February 26, 2004. Preliminary results of the review, which covered the period of May 17, 2008, to April 27, 2012, were discussed with Louisiana managers on the last day of the review.

A draft of this report was provided to Louisiana for factual comment on May 23, 2012. Louisiana responded to the findings and conclusions of the review by letter dated June 25, 2012. A copy of the State's response is included as an attachment to this report. An MRB met on July 12, 2012, to consider the proposed final report. The MRB found the Louisiana Agreement State Program adequate to protect public health and safety, and compatible with the NRC's program.

The Louisiana Agreement State Program is administered by the Assessment Division–Radiation (the Division), which is located under the Office of Environmental Compliance within the Department of Environmental Quality (the Department). Organization charts for the Department and the Division are included as Appendix B.

At the time of the review, the Louisiana Agreement State Program regulated 504 specific licenses authorizing possession and use of radioactive materials. The review focused on the radioactive materials program 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 Louisiana.

In preparation for the review, a questionnaire addressing the common and applicable non-common performance indicators was sent to the Department on December 13, 2012. The Department provided its response to the questionnaire on April 5, 2012. A copy of the questionnaire response can be found in NRC's Agencywide Documents Access and Management System (ADAMS) using the Accession Number ML12129A058.

The review team's general approach for conducting the review consisted of (1) an examination of the Department's response to the questionnaire, (2) review of applicable Louisiana statutes and regulations, (3) analysis of quantitative information from the Department's database, (4) technical review of selected regulatory actions, (5) field accompaniments of five inspectors, and (6) interviews with staff and managers. The review team evaluated the information gathered against the established criteria for each common and the applicable non-common performance indicators and made a preliminary assessment of the Louisiana Agreement State Program's performance.

Section 2.0 of this report covers the State's actions in response to recommendations made during 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.

2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

During the previous IMPEP review, which concluded on May 16, 2008, the review team made two recommendations regarding the Louisiana Agreement State Program's performance. The status of each recommendation is as follows:

1. The review team recommends that the State take measures to evaluate corrective actions of all radioactive material incidents, ensure proper documentation of the review, and appropriately follow up on the corrective actions at subsequent inspections. (Section 3.5 of the 2008 IMPEP Report)

   Status: The State has taken measures including revision of the inspection checklist procedure, to evaluate and followup on corrective actions and document review of incidents in subsequent inspection reports. This recommendation is closed.

2. The review team recommends that the State adhere to the document format and content guidance in current version of NUREG-1556, Volume 3. (Section 4.2.2 of the 2008 IMPEP Report)

   Status: Similar issues regarding format and content errors were identified during the 2012 review of the Sealed Source and Device Evaluation Program. This recommendation remains open.

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

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 managers and staff, reviewed job descriptions and training records, and considered workload backlogs.

The Department manages the Office of Environmental Compliance which oversees the Division. The Division is composed of the Licensing and Registration Section and the Surveillance and Enforcement Section which are responsible for materials inspection, licensing and compliance activities, and emergency response activities.

At the time of the review, there were 26 technical staff members with various degrees of involvement in the radioactive materials program, totaling approximately 19 full-time equivalents (FTE). Ten staff members left the Department since the last review and nine staff were hired. The Department was recently informed that the position of Senior Technical Staff, vacated November 2011, was eliminated. Department managers are in the process of identifying, assigning, and performing the duties of this position. No positions were vacant at the time of this review. The review team determined that staffing levels were adequate for the Agreement State program.

The Department had developed a documented training plan for technical staff in response to a recommendation from the 2003 IMPEP. Department management could not provide the actual procedure to the team for review; however, the team determined that it was being implemented. The team discussed the need for a documented procedure for knowledge management. The Department managers immediately developed one for the team to review that appeared consistent with the requirements 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." Staff members are assigned increasingly complex duties as they progress through the qualification process. The review team concluded that the Department's training program is adequate to carry out its regulatory duties and noted that Louisiana management supports the Department training program.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that Louisiana'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: (1) inspection frequency, (2) overdue inspections, (3) initial inspections of new licenses, (4) timely dispatch of inspection findings to licensees, and (5) 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 management and staff.

The review team verified that Louisiana's inspection frequencies for all types of radioactive material licenses are at least as frequent as similar license types listed in IMC 2800, "Materials Inspection Program." Many of the Department's license categories are inspected at a more frequent inspection schedule than those established in IMC 2800 for similar license types, including nuclear medicine, gauges, and manufacturer/distribution licensees.

The Department conducted approximately 660 higher priority (Priority 1, 2, and 3) inspections during the review period based on the inspection frequencies established in IMC 2800. Nineteen of these inspections were conducted overdue by more than 25 percent of the inspection frequency prescribed in IMC 2800. In addition, the Department performed approximately 77 initial inspections during the review period, 6 of which were conducted overdue. As required by IMC 2800, initial inspections should be conducted within 12 months of license issuance. The inspections were conducted late due to the military deployment of one

inspector for over one year; he has since returned. There were no overdue inspections at the time of the review. Overall, the review team calculated that the Department performed approximately three percent of its inspections overdue during the review period.

The review team evaluated the Department's timeliness in providing inspection findings to licensees. A sampling of 25 inspection reports indicated that none of the inspection findings were communicated to the licensees beyond the Department's goal of 30 days after the inspection.

During the review period, the Department granted 205 reciprocity permits, all of which were candidate licensees based upon the criteria in IMC 1220, "Processing of NRC Form 241 and Inspection of Agreement State Licensees Operating Under 10 CFR 150.20." The review team determined that the Department exceeded the NRC's criteria of inspecting 20 percent of candidate licensees operating under reciprocity in each of the four years covered by the review period.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that Louisiana'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 the inspection reports, enforcement documentation, inspection field notes, and interviewed inspectors for 25 radioactive materials inspections conducted during the review period. The casework reviewed included inspections conducted by 11 Department inspectors and covered inspections of various license types, including academic broad scope, medical institutions with high dose rate remote afterloaders, unsealed radioiodine therapy, permanent or temporary implant brachytherapy, radionuclide production (cyclotron), medical-diagnostic, portable gauges, industrial radiography, self-shielded irradiators, nuclear pharmacy, mobile nuclear medicine, well-logging, and Increased Security Controls for Large Quantities of Radioactive Materials (Increased Controls). Appendix C lists the inspection casework files reviewed as well as the results of the inspector accompaniments.

Based on the evaluation of casework, the review team noted that inspections covered all aspects of licensed radiation programs. The review team found that inspection reports were generally thorough, complete, consistent, and of high quality, with sufficient documentation to ensure that a licensee's performance with respect to health and safety was acceptable. The majority of the documentation supported violations, recommendations made to licensees, unresolved safety issues, and discussions held with licensees during exit interviews.

The inspection procedures utilized by the Department are consistent with the inspection guidance outlined in IMC 2800, including a compliance checklist used by inspectors. An inspection report is completed by the inspector which is then peer reviewed by a second inspector and subsequently emailed to the inspector's supervisor for final review and signature. Supervisory accompaniments were conducted at least annually for all inspectors.

The review team determined that the inspection findings were appropriate and prompt regulatory actions were taken, as necessary. All inspection findings were clearly stated and

documented in the reports and sent to the licensees with the appropriate letter detailing the results of the inspection. The Department issues to the licensee a Field Interview Form at the exit meeting of the inspection and, when required, a letter indicating a Notice of Deficiency (NOD), in letter format, which details the results of the inspection. When the Department issues a NOD, the licensee is required to provide a written corrective action plan, based on the deficiencies cited, within 30 days. All findings are reviewed by the Enforcement Coordinator and inspection staff.

The review team noted that the Department has an adequate supply of survey instruments to support their inspection program. Appropriate, calibrated survey instrumentation, such as Geiger-Mueller meters, scintillation detectors, ion chambers, micro-R meters, and neutron detectors, were observed to be available. The Department also has a portable multi-channel analyzer for isotope determination of unknown or unidentified radioactive material. Survey instruments are calibrated at least annually, or as needed, by state-licensed calibration services with National Institute of Standards and Technology traceable sources, in the geographic area of each regional office. The Department uses a database to track each instrument, its current location, and next calibration date.

Accompaniments of five Department inspectors were conducted by one IMPEP team member during the week of March 19-23, 2012. The inspectors were accompanied during health and safety inspections of industrial radiography source manufacturing, industrial radiography, medical broad scope including high dose rate remote afterloader therapy, unsealed radioiodine therapy, permanent/ temporary implant brachytherapy, and self-shielded irradiators, PET medical-diagnostic, well-logging, and Increased Controls. The accompaniments are identified in Appendix C. During the accompaniments, the inspectors demonstrated appropriate inspection techniques, knowledge of the regulations, and conducted performance-based inspections. In response to the recommendation from the previous IMPEP review, the inspection checklist was revised to address incident followup. The inspectors were trained, well-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 inspections were adequate to assess radiological health and safety and security at the licensed facilities.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that Louisiana'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 license reviewers for 24 specific licensing actions. 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, 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 3 new licenses, 7 renewals, 2 termination actions, and 12 amendments. Files reviewed included a cross-section of license types, including broadscope, medical diagnostic and therapy, gamma knife, industrial radiography, research and development, nuclear pharmacy, gauges, manufacturers, pool and self-shielded irradiators. The casework sample represented work from four license reviewers. A listing of the licensing casework examined, with case-specific comments is provided in Appendix D.

Overall, the review team found that the licensing actions were thorough, complete, consistent, and properly addressed health, safety, and security issues. License reviewers use the NRC NUREG-1556 series guidance documents, policies, checklists, and standard license conditions specific to the type of licensing actions to ensure consistency in licenses. Of the actions reviewed, there were approximately five actions that had deficiencies. The licensing staff addressed and corrected most of the deficiencies prior to the preliminary exit meeting with management. Some of the deficiencies identified included (1) not reviewing a historical authorization of U-235 for shielding in lieu of depleted uranium as part of a license renewal action, (2) using the American Board of Radiology computer generated results for oral exams only, in lieu of the actual board certificate to document the oral and written exams of a physician authorized user, (3) not listing the Radiation Safety Committee Chair on a broad scope license, and (4) not requiring that the processes used by the Radiation Safety Committee to approve authorized users and designated rooms be submitted during a broad scope license renewal action. The review team determined there was no consistent pattern to the deficiencies identified; however, these deficiencies either did not meet the required technical quality for the review or there was incomplete supporting documentation for the licensing action.

In addition, the review team identified that three medical attestations were not provided as part of the supporting documentation for authorizing a radiation safety officer and two medical physicists. However, the review team determined that the requirements for written attestations are not captured in the current medical regulations for the State of Louisiana, and therefore is not required documentation to support the respective licensing actions. The final medical regulations that were adopted under RATS ID 2007-1 have been submitted to the NRC and are under review at this time.

On June 13, 2003, the NRC issued Orders to all panoramic and underwater irradiator licensees authorized to possess greater than 10,000 curies of byproduct material. One of the licenses issued by the Department authorized an amount of radioactive material in a pool irradiator greater than 10,000 curies and the licensee had received the aforementioned Order. The NRC received information from the licensee in 2003 indicating that, although authorized for greater than 10,000 curies, they possessed quantities significantly below 10,000 curies and, therefore, the specific Order was not applicable. During the review, the Department contacted the licensee and requested a current level of activity in the pool. The review team noted that the current activity corresponded with previous documentation of the activity from 2002 and 2003, with calculated decay correction. Therefore, the pool did not meet the 500 rad/hr at one meter requirement as specified in Chapter 17, "Licensing and Radiation Safety Requirements for Irradiators" under Title 33, Part XV of the Louisiana Code, which is equivalent to Title 10 of the Code of Federal Regulations (CFR) Part 36 requirement. The licensee was implementing the Increased Controls and Fingerprinting Orders as required, for the facility. The Department

amended the license during the IMPEP review to reflect an authorized activity well below the 10,000 curie level in order to show that the underwater irradiator Order is not applicable.

Deficiency letters reviewed clearly stated regulatory positions and were used appropriately. In addition to using formal written requests, the staff frequently used telephone or email requests for clarification or to obtain additional information from the licensee or applicant. However, the review team also identified that some of the requests for additional information were not always documented, which resulted in not being able to ascertain what was authorized in the licensing action. This was especially evident for those requests that were partially authorized or for requests to authorize specific individuals for certain high-risk activities, such as source retrieval. In addition, the Department does not use cover letters for its licensing actions, so there is no formal correspondence to accompany the approved authorization. The Department incorporates the licensee's application date and includes the language "and all subsequent correspondence" as part of the license tie-down condition. The review team discussed the consideration to specifically list documents as part of the tie-down conditions, in order to ascertain what was specifically authorized and in some cases to identify certain individuals that are specifically authorized for high-risk activities, such as source retrieval. Based on discussions with the staff and management, the review team understood that all correspondence from the licensee to the Department is tied-down by the particular license condition. Based on the enforcement actions taken by the Department, it appears that the license and all tie-down conditions are enforceable.

All license evaluators were qualified for the respective licensing actions reviewed. The Department performs a peer review, technical review and a supervisory review for all licensing actions. All licensing actions are then routed to the Program Manager and Administrator and are subsequently signed by the Assistant Secretary, Office of Environmental Compliance under the Department of Environmental Quality. Based on the review team's discussions with the staff and management, it was determined that the peer review is primarily administrative in nature to ensure that the license format, amendment number, and dates are correct, whereas the technical review primarily focuses on the specific request and corresponding authorization. Since the review team identified several deficiencies regarding the technical quality and supporting documentation of the licensing actions in addition to identified deficiencies in other products issued by the Department, including sealed source and device registries (see Section 4.2.2), the review team recommends that the Department evaluate its review processes and develop and implement appropriate actions to ensure that products issued are of high technical quality and meet the standard expectations of the Department.

Once all of the supporting documentation is received for a licensing action, then the Department typically issues the action within 30-days. The results of this metric are provided to the Louisiana legislature on a quarterly basis.

Licenses are initially issued for a five-year period. Prior to the expiration date, the licensee is required to submit a "partial" renewal and attest that their program has not changed or the licensee is required to submit any changes to the program at this time. The license is then issued for a four-year period. Prior to the four-year expiration date, the licensee is required to submit a full license renewal application. In this manner, the license renewals are completed within 10 years and there is an attestation given during the middle of the 10-year period.

On June 21, 2010, the NRC issued RCPD letter RCPD-10-007, "Requesting Implementation of a Policy on Maximum Possession Limits for Radioactive Material Licenses" to all Agreement States and Michigan. The Department has completed the requested action for all increased control licenses and has completed approximately 95 percent of the remaining material licenses. The Department anticipates that all licenses will be completed by the end of 2013.

The Department has access to the National Source Tracking System (NSTS) and utilizes and updates the database, as necessary, when completing certain licensing actions. The Department did not have any licensees with outstanding NSTS reconciliations for 2011. The Department performs pre-licensing checks of all new applicants. The Department's pre-licensing review methods incorporate the essential elements of NRC's revised pre-licensing guidance to verify that the applicant will use requested radioactive materials as intended. All new licensees receive a pre-licensing site visit which includes an evaluation of the applicant's radiation safety and security programs prior to receipt of the initial license.

The review team examined the Department's licensing practices regarding the Increased Controls and Fingerprinting Orders. The review team noted that the State uses legally binding license conditions that meet the criteria for implementing the Increased Controls and Fingerprint Orders, as appropriate. The review team analyzed the Department's methodology for identifying those licenses and found the rationale was thorough and accurate. The review team confirmed that license reviewers evaluated new license applications and license amendments using the same criteria. The Department requires full implementation of the Increased Controls prior to issuance of a new license or license amendment that meets the established criteria.

The review team examined the Department's processes for the control of sensitive information. The Department's licensing system is entirely electronic, except for the increased controls supporting documentation. The increased controls license itself is maintained in the electronic system; however, there are no markings on the license to indicate it is considered sensitive information. Access to the electronic radiation records is limited to the Radiation Division and those with a need to know. The increased controls sensitive information that is maintained separately from the electronic system is placed in an Increased Controls marked envelope and secured from inadvertent disclosure in a locked file cabinet. The Department recently received approval from their legal counsel that the increased control licenses, which are maintained on the electronic system, may be marked to indicate they are security-related. The Department's legal counsel determined that this action would not alter the State's obligations under the Public Records Act or other applicable rules. The Department indicated that they would be marking the electronic increased control licenses during future amendments and renewals.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that Louisiana'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, evaluated selected incidents reported for Louisiana in the Nuclear Material Events Database (NMED) against those contained in the Department's files, and evaluated the

casework for eight radioactive materials incidents. A listing of the incident casework examined, with case-specific comments, may be found in Appendix E. The review team also evaluated the Department's response to eight allegations involving radioactive materials. There were no allegations referred to the State by the NRC during the review period.

The review team examined the Department's incident and allegation processes, including written procedures for handling allegations and incident response, file documentation, notification of incidents to the NRC Headquarters Operations Center, and the use of NMED software. When notification of an incident or an allegation is received, the Staff Technical Advisor and the Surveillance Supervisor or Program Manager determine the appropriate level of initial response.

The review team identified 64 radioactive material incidents in NMED for Louisiana during the review period. As a policy, the State chose to report all incidents to the NRC through NMED regardless of reportability. The review team selected eight radioactive material incidents for evaluation. The incidents selected for review included the following categories: potential overexposure, medical event, damaged equipment, equipment or procedural failure, and a fire. The review team determined that the Department's response to incidents was complete and comprehensive. Initial responses were prompt and well-coordinated, and the level of effort was commensurate with the health and safety significance. The Department dispatched inspectors for on-site investigations in all of the cases reviewed and took suitable enforcement and followup actions. If the incident met the reportability thresholds, as established in the Office of Federal and State Materials and Environmental Management Programs (FSME) Procedure SA-300 "Reporting Material Events," the State notified the NRC Headquarters Operations Center and entered the information into NMED, in a prompt manner. The actions taken in response to incidents were documented and filed, and the data were submitted to the NRC's contractor responsible for maintaining NMED for inclusion in the database.

Incidents were addressed in subsequent inspections as recommended from the 2008 IMPEP review. Interviews of inspectors and a sampling of reports for those inspections showed that followup and corrective actions are evaluated and documented. However, the review team noted that the documentation did not give details as to the effectiveness of the corrective actions.

In evaluating the effectiveness of the Department's response to allegations, the review team evaluated the completed casework for eight allegations. The review team concluded that the Department consistently took prompt and appropriate actions in response to concerns raised. The review team noted that the Department documented the investigations of concerns and retained all necessary documentation to appropriately close the allegations. When appropriate, the Department notified the concerned individuals of the conclusion of its investigations. The review team determined that the Department adequately protected the identity of concerned individuals.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that Louisiana'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 (SS&D) Program, (3) Low-Level Radioactive Waste (LLRW) Disposal Program, and (4) Uranium Recovery Program. The NRC's Agreement with Louisiana does not relinquish regulatory authority for a low level radioactive waste disposal or uranium recovery program; therefore, only the first two non-common performance indicators applied to this review.

4.1 Compatibility Requirements

4.1.1 Legislation

Louisiana became an Agreement State in 1967. The statutory authority for the Louisiana program is found in Louisiana Administrative Code, Title 33, Part XV, Radiation Protection, and apply to all ionizing radiation. The Department is designated as the State's radiation control agency. The review team noted that no legislation affecting the radiation control program was passed during the review period.

4.1.2 Program Elements Required for Compatibility

The review team evaluated Louisiana's response to the questionnaire relative to this indicator, reviewed the status of regulations required to be adopted by the State under the Commission's adequacy and compatibility policy, and verified the adoption of regulations with data obtained from the State Regulation Status Sheet that FSME maintains. Louisiana's regulation process normally takes approximately two to three months, if the proposed State regulations are identical to Federal regulations, and six months maximum if they are not identical.

During the review period, Louisiana submitted six final regulation amendments, no proposed regulation amendments and one legally binding license condition to the NRC for a compatibility review. Two of the amendments were overdue for State adoption at the time of submission. The NRC's compatibility review resulted in six comments, which will need to be addressed by the State in upcoming rulemaking activities. Current NRC policy requires that Agreement States adopt certain equivalent regulations or legally binding requirements no later than three years after the effective date of NRC's regulations.

The following four amendments have not been submitted as of the time of this review and are overdue:

- "Medical Use of Byproduct Material – Minor Corrections and Clarifications," 10 CFR Parts 32 and 35 amendments (72 FR 45147, 72 FR 54207) that became effective on October 29, 2007, and were due for Agreement State adoption on October 29, 2010.

- "Exemptions From Licensing, General Licenses, and Distribution of Byproduct Material: Licensing and Reporting Requirements," 10 CFR Parts 30, 31, 32, and 150 amendments (72 FR 58473) that became effective on December 17, 2007, and was due for Agreement State adoption by December 17, 2010.

- "Requirements for Expanded Definition of Byproduct Material," Parts 20, 30, 31, 32, 33, 35, 61, and 150 amendments (72 FR 55864) that became effective on November 30, 2007, and was due for Agreement State adoption by November 30, 2010.

- "Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent," 10 CFR Parts 19 and 20 amendments (72 FR 68043) that became effective February 15, 2008, and was due for Agreement State adoption by February 15, 2011.

The following two amendments were submitted overdue during this review period:

- "Energy Compensation Sources for Well Logging and Other Regulatory Clarifications", 10 CFR Part 39 amendment (65 FR 20337) that was due for Agreement State adoption on May 17, 2003.

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

At the time of this review, the following eight amendments have not been reviewed as final regulations and were overdue:

- "Standards for Protection Against Radiation", 10 CFR Part 20 amendment (56 FR 23360) (56 FR 61352) (57 FR 38588) (57 FR 57877) (58 FR 67657) (59 FR 41641) (60 FR 20183) that became effective on January 1, 1991, and was due for Agreement State adoption by January 1, 1994. The review team noted that this amendment had been reviewed as a proposed regulation, but not submitted as a final regulation for NRC review.

- "Notification of Incidents," 10 CFR Parts 20, 30, 31, 34, 39, 40, and 70 amendments (56 FR 64980) that became effective on October 15, 1991, and was due for Agreement State adoption by October 15, 1994.

- "Decommissioning Recordkeeping and License Termination: Documentation Additions," 10 CFR Parts 30 and 40 amendments (58 FR 39628) that became effective on October 25, 1993, and was due for Agreement State adoption by October 25, 1996.

- "Termination or Transfer of Licensed Activities: Recordkeeping Requirements," 10 CFR Parts 20, 30, 40, 61, and 70 amendments (61 FR 24669) that became effective on June 17, 1996, and was due for Agreement State adoption by June 17, 1999.

- "Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiography Operations," Parts 30, 34, 71, and 150 amendments (62 FR 28947) that became effective on June 27, 1997, and was due for Agreement State adoption by June 27, 2000.

- "Minor Corrections, Clarifying Changes, and a Minor Policy Change," 10 CFR Parts 20, 35, and 36 amendments (63 FR 39477, 63 FR 45393) that became effective on October 26, 1998, and was due for Agreement State adoption by October 26, 2001.

- "Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material," 10 CFR Parts 30, 31, and 32 amendments (65 FR 79162) that became effective on February 16, 2001, and was due for Agreement State adoption on February 16, 2004.

- "Minor Amendments", 10 CFR Parts 20, 30, 32, 35, 40 and 70 amendments (71 FR 15005) that became effective on March 27, 2006, and was due for Agreement State adoption on March 27, 2009.

The following NRC amendments will need to be addressed in upcoming rulemakings or by adopting alternate legally binding requirements:

- "Medical Use of Byproduct Material – Authorized User Clarification," 10 CFR Part 35 amendment (74 FR 33901) that became effective on September 28, 2009, and is due for Agreement State adoption by September 28, 2012.

- "Decommissioning Planning", 10 CFR Parts 20, 30, 40 and 70 (76 FR 35512) that became effective on December 17, 2012, and is due for Agreement State adoption by December 17, 2015.

- "Licenses, Certifications, and Approvals for Materials Licensees", 10 CFR Parts 30, 36, 39, 40, 70 and 150 (76 FR 56951) that became effective on November 14, 2011, and is due for Agreement State adoption by November 14, 2014.

- "Change of Compatibility of 10 CFR 31.5 and 31.6", (77 FR 3640) that became effective on January 25, 2012, and is due for Agreement State adoption by January 25, 2015.

As reported in Section 3.1, one of the duties of the vacated Senior Technical Staff position included the development of regulations. The Program Manager is in the process of identifying overdue regulation amendments, submitting them for NRC review, reviewing the NRC comments on the final regulation amendments submitted during this review period, and planning to address the comments in upcoming rulemaking.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that Louisiana's performance with respect to the indicator, Compatibility Requirements, be found satisfactory, but needs improvement.

4.2 Sealed Source and Device Evaluation Program

In evaluating this indicator, the review team used three sub elements to evaluate the Department's performance regarding the SS&D Evaluation Program. These subelements include the following: (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 Department's SS&D evaluation activities, the review team examined the Department's response to the IMPEP questionnaire on this indicator, performed a search of the SS&D Registry for registrations issued by Louisiana, and performed NMED searches of

manufacturers and distributors identified on SS&D registrations issued by Louisiana. A review of new, amended, and corrected SS&D evaluations and supporting documents covering the review period was conducted. The review team noted the staff's use of guidance documents and procedures, interviewed managers and staff, and verified the use of regulations, license conditions, and inspections to enforce commitments made in the applications.

4.2.1 Technical Staffing and Training

During the review period, one qualified SS&D reviewer left the Department. At the time of the review, the Department had four qualified SS&D reviewers with full signature authority. Two of the qualified reviewers did not perform any reviews during the review period.

The Department completed one new SS&D registration, five SS&D registrations were amended in entirety, and eight SS&D registration inactivations during the review period. Three of the four qualified reviewers with full signature authority each have over 10 years of experience with the Department and the fourth reviewer has five years experience. Each reviewer has obtained either a bachelor's or master's degree in science. All of the reviewers have attended the NRC SS&D workshop. The Department had two pending SS&D evaluations. The review team determined that the staffing level is adequate for the Department's SS&D workload.

4.2.2 Technical Quality of the Product Evaluation Program

During the review period, the Department processed 14 SS&D actions. These actions consist of one new SS&D registration, five SS&D registrations amended in entirety, and eight SS&D registration inactivations. The casework review included one new, five were amended in entirety, and three inactivations to include reviewing all supporting documentation, licensing actions, and inspections. The review team evaluated 9 of these 14 registrations. A listing of the SS&D registrations evaluated, with case-specific comments, can be found in Appendix F.

The review team confirmed that the Department's policy is to follow the recommended guidance from the NRC SS&D training workshops and NUREG-1556, Volume 3, Revision 1, "Consolidated Guidance About Materials Licenses - Applications for Sealed Source and Device Evaluation and Registration." The review team verified that appropriate review checklists were used to ensure that all relevant materials had been submitted and reviewed. The checklists were retained in the SS&D files that identified the responsible reviewer. The review team verified that pertinent American National Standards Institute standards, NRC Regulatory Guides, and applicable references were available and used when performing SS&D reviews.

The review team noted that all nine of the reviewed registrations did not follow the format and content recommended in NUREG-1556, Volume 3. In cases where the format and content were not followed, the Department relied upon the format and content from the previously issued registration without checking the NUREG. For example, in four registrations reviewed, each applicant submitted the incorrect use code identified in Appendix C of the NUREG. (This issue was identified during the 2008 IMPEP review.) Also for six registrations reviewed, the date on the registration's first page did not match the dates on the signature page. These formatting issues did not adversely impact the technical quality or content of the reviews; however, because the registrations are used nationally (especially first page information), the

documents should be consistent with national standards. The review team recommends that the State adhere to the document format and content guidance in the current version of NUREG-1556, Volume 3.

The registration files do not contain all correspondence, engineering drawings, photographs, radiation profiles, and details of the applicant's quality assurance and quality control program and other commitments made that are incorporated by reference into the registration. For example, the "Reference Section" of three registrations did not include the standard language indicating that the documents and commitments are incorporated by reference into the registration. Five registrations contain documents that could not be found at the time of the onsite review or documents with incorrect dates. One initial application was superseded by a more recent revision that resulted in deficiency items responses, none of which were incorporated into the registration's reference section. The SS&D reviewers indicated that they do not review previous documents in the reference section to verify that they are appropriate, need to be changed, or accessible during amendment in its entirety reviews. The Department enforces the requirements of SS&D registrations through conditions made part of specific licenses issued to the manufacturers or distributors of SS&D products by listing the SS&D registrations numbers in a license condition. The license tie-down condition requires the licensee to follow the commitments made in the registration numbers listed in the license condition. None of the SS&D registration commitments listed in the SS&D "Reference Section" are uniquely identified on the license except by the SS&D registration number. The Department may have difficulty enforcing registration commitments or evaluate any product defect issues that may arise if it does not actually possess the commitment documents.

The majority of the documents not available at the time of the review appear to be part of an initial upload into the document imaging system during 2002-2003 when the Department moved to a paperless record keeping system. The recently received documents were located in the document imaging system and the SS&D "Reference Section" did contain a few errors. For example, the reference section indicated a document date, but a review of the document indicated that this date was actually the received date and not the document date.

While most of the registrations clearly summarized the product evaluation to provide license reviewers with adequate information to license the products, two of the registrations did not list external radiation limits at the specified distances as required in NUREG-1556, Volume 3. In addition, a new registration did not provide critical information that the brachytherapy sources are delivered non-sterile and provide the maximum temperatures and pressures for sterilization. While a detailed review of this issue showed the source could withstand these temperature and pressures and no health and safety issue existed, this information is important to regulatory agencies in licensing these sources. The review team found that deficiency letters clearly stated regulatory positions and health and safety issues were properly addressed. With the exception of the formatting issues and reference documents missing, the review team found that the majority evaluations were of good quality.

During the onsite review, the team also discovered one registration amended on January 11, 2011, was not transmitted to NRC. This registration was also not included in the Department's initial response to the questionnaire. A revised questionnaire response was provided to include this registration.

The review team noted that the Department had terminated a specific license associated with multiple SS&D registrations and did not address inactivation of the registrations. The review team also identified that the Department did not address inactivation of one additional SS&D registration. The review team concluded that no adverse health and safety issues resulted and discussed the benefits of performing inactivation of registrations prior to or concurrent with performing license terminations. The SS&D reviewer agreed to evaluate the need to inactivate the registrations in question and to inactivate the registrations consistent with the guidance in NUREG-1556, as applicable. At the time of the onsite review, the Department had two registration amendments currently under review.

The review team found that while the Department has multiple levels of peer, technical, and management review of documents that are part of their processes in issuing SS&D registrations and the associated license amendments, these reviews did not identify these issues prior to the SS&D registration being issued. (See recommendation discussed in Section 3.4, Technical Quality of Licensing Actions.)

4.2.3 Evaluation of Defects and Incidents Regarding SS&Ds

Based upon the Department's response to the questionnaire, interview of Department managers, and the review team's searches of NMED, the review team selected a suspect incident (NMED No. 100251 reported during the review period involving SS&D products registered in Louisiana). NMED No. 100251 was reviewed because the event description described a potential product defect. After reviewing the event with the SS&D reviewer, the review team determined this was event was not related to a product defect. While an NMED text search indicated several industrial radiography events, none was related to a product/equipment defect.

The Department staff indicated that SS&D incidents were reviewed and followed up by the Senior Technical Advisor (DCLB). This individual left the Department in November 2011 and the person who is to assume these duties has not been identified at the time of the onsite review. The Department reported that there were no allegations received by the Department related to SS&D products registered in Louisiana during the review period.

The review team recommends that all of the active sealed source and device registration commitments be located and made readily accessible by the State.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that Louisiana's performance with respect to the indicator, SS&D Evaluation Program, be found satisfactory, but needs improvement.

4.3 Low-level Radioactive Waste Disposal Program

In 1981, the NRC amended its Policy Statement, "Criteria for Guidance of States and NRC in Discontinuance of NRC Regulatory Authority and Assumption Thereof by States Through Agreement," to allow a State to seek an amendment for the regulation of LLRW as a separate category. Although the Louisiana Agreement State Program has LLRW disposal authority, the NRC has not required States to have a program for licensing a LLRW disposal facility until such

time as the State has been designated as a host State for a LLRW disposal facility. When an Agreement State has been notified or becomes aware of the need to regulate a LLRW disposal facility, they are expected to put in place a regulatory program which will meet the criteria for an adequate and compatible LLRW disposal program. There are no plans for a LLRW disposal facility in Louisiana. Accordingly, the review team did not review this indicator.

5.0 SUMMARY

As noted in Sections 3.0 and 4.0 above, Louisiana's performance was found satisfactory for five out of the seven performance indicators reviewed, and satisfactory, but needs improvement, for the indicators, Compatibility Requirements, and the SS&D Evaluation Program. The review team made two recommendations regarding program performance by the State and determined that one recommendation from the 2008 IMPEP review should be closed and another should be kept open. Accordingly, the review team recommended, and the MRB agreed, that the Louisiana Agreement State Program be found adequate to protect public health and safety and compatible with the NRC's program. Based on the results of the current IMPEP review, the review team recommended, and the MRB agreed, that the next full IMPEP review take place in approximately 4 years and that a periodic meeting be held in 18 to 24 months.

Below are the review team's recommendations, as mentioned in the report, for evaluation and implementation by the State:

RECOMMENDATIONS

1. The review team recommends that the Department evaluate its review processes and develop appropriate actions to ensure that products issued are of high technical quality and meet the standard expectations of the Department. (Section 3.4 and 4.2.2)

2. The review team recommends that all of the active sealed source and device registration commitments be located and made readily accessible by the State. (Section 4.2.2)

3. The review team recommends that the State adhere to the document format and content guidance in current version NUREG-1556, Volume 3. (Section 4.2.2) (Kept open from the 2008 IMPEP review).

LIST OF APPENDICES

APPENDIX A

IMPEP REVIEW TEAM MEMBERS

Name	**Area of Responsibility**
Bryan Parker, Region III	Team Leader Technical Quality of Incident and Allegation Activities
Michelle Beardsley, FSME	Technical Staffing and Training Status of Materials Inspection Program Compatibility Requirements
Robert Hays, Region III	Technical Quality of Inspections Inspector Accompaniments
Rachel Browder, Region IV	Technical Quality of Licensing Actions
Michael Stephens, Florida	Sealed Source and Device Evaluation Program

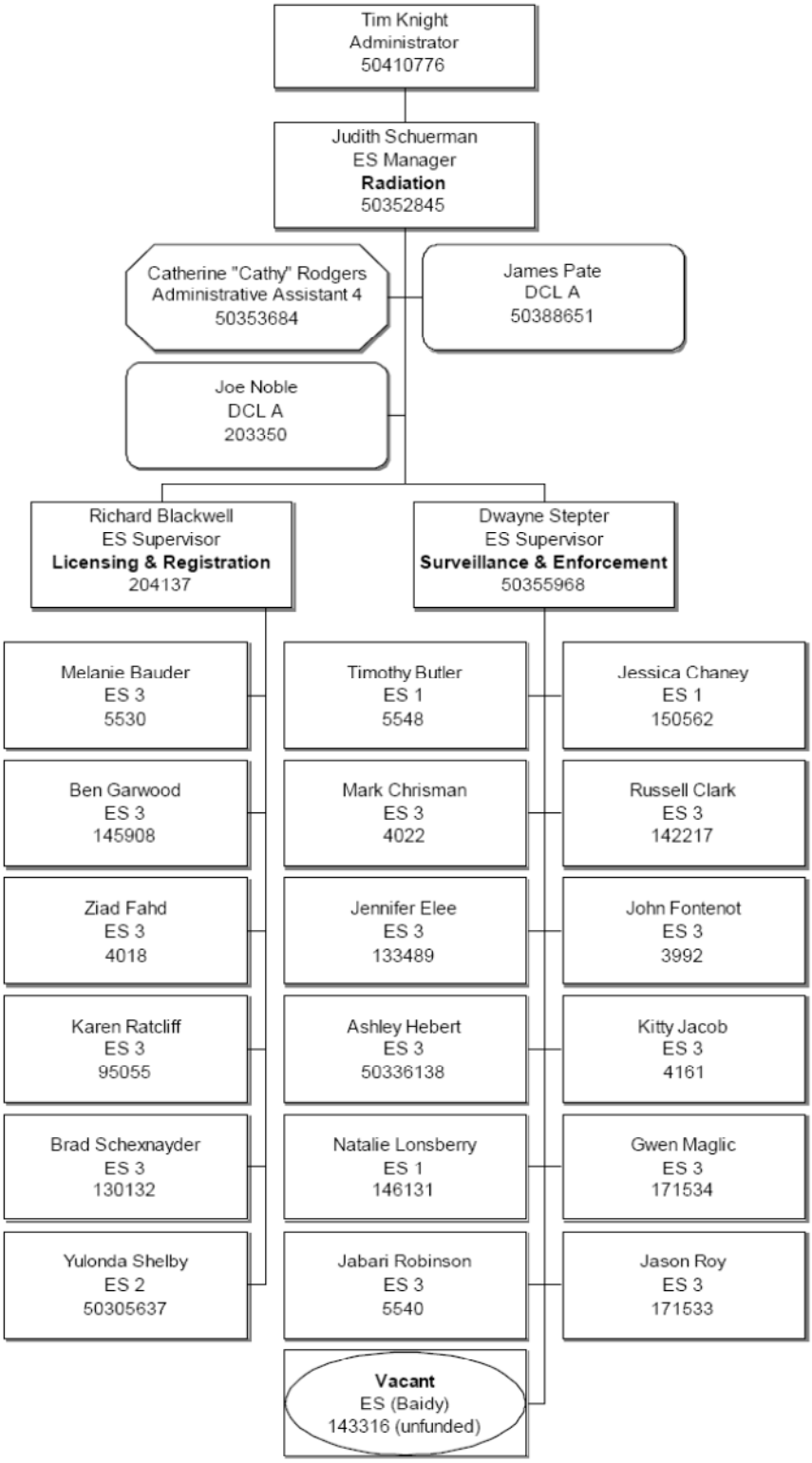
APPENDIX B

LOUISIANA ORGANIZATION CHARTS

ADAMS ACCESSION NO.: ML120960347

State of Louisiana
Department of Environmental Quality
January 26, 2012

Assessment Division
Radiation
January 5, 2012



APPENDIX C

INSPECTION CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1
Licensee: Cardinal Health 414, LLC — License No.: LA-5115-L01 (AI# 128228)
Inspection Type: Routine, Announced — Priority: 1
Inspection Date: 11/17/11 — Inspector: JF

File No.: 2
Licensee: Lafayette General Medical Center — License No.: LA-5330-L01 (AI# 35788)
Inspection Type: Routine, Announced — Priority: 2
Inspection Date: 5/15/08 — Inspector: JF

File No.: 3
Licensee: Qualitech Services, Inc. — License No.: LA-6346-L01 (AI# 102655)
Inspection Type: Routine, Announced — Priority: 1
Inspection Date: 9/24/10 — Inspector: JB

File No.: 4
Licensee: Southern Isotopes — License No.: LA-10477-L01 (AI# 91705)
Inspection Type: Routine, Announced — Priority: 1
Inspection Date: 3/29/11 — Inspector: JB

File No.: 5
Licensee: Savoy Technical Services, Inc. — License No.: LA-11235-L01 (AI# 23431)
Inspection Type: Routine, Unannounced — Priority: 1
Inspection Date: 03/27/12 — Inspector: JR

File No.: 6
Licensee: Abbeville General Hospital — License No.: LA-0222-L01 (AI# 1586)
Inspection Type: Routine, Announced — Priority: 2
Inspection Date: 4/26/11 — Inspector: AH

File No.: 7
Licensee: Christus St. Francis Cabrini Hospital — License No.: LA-1121-L01 (AI# 55)
Inspection Type: Routine, Announced — Priority: 2
Inspection Date: 2/12/09 — Inspector: JE

File No.: 8
Licensee: Louisiana State University — License No.: LA-0001-L01 (AI# 5540)
Inspection Type: Routine, Announced — Priority: 1
Inspection Date: 2/17/12 — Inspectors: MC, JN

File No.: 9
Licensee: H & H X-Ray
License No.: LA-2970-L01 (AI# 30909)
Inspection Type: Routine, Unannounced
Priority: 1
Inspection Date: 2/29/12
Inspector: MC

File No.: 10
Licensee: Rapides Regional Medical Center
License No.: LA-0350-L01 (AI# 2971)
Inspection Type: Routine, Announced
Priority: 2
Inspection Date: 3/16/09
Inspector: JE

File No.: 11
Licensee: Shiloh Contractors, Inc.
License No.: LA-10254-L01 (AI# 128921)
Inspection Type: Routine, Announced
Priority: 4
Inspection Date: 6/22/09
Inspector: JB

File No.: 12
Licensee: ICON-Industrial Control
License No.: LA-10631-L01 (AI# 100040)
Inspection Type: Routine, Announced
Priority: 4
Inspection Date: 7/23/09
Inspector: JG

File No.: 13
Licensee: Women's and Children's Hospital
License No.: LA-10698-L01 (AI# 12296)
Inspection Type: Routine, Announced
Priority: 2
Inspection Date: 12/08/11
Inspector: AH

File No.: 14
Licensee: Pioneer Pharmacy
License No.: LA-11301-L01 (AI# 174653)
Inspection Type: Routine, Unannounced
Priority: 1
Inspection Date: 05/12/11
Inspectors: MM, JR

File No.: 15
Licensee: Scientific Drilling International Inc.
License No.: LA-10950-L01 (AI# 11373)
Inspection Type: Routine, Unannounced
Priority: 3
Inspection Date: 6/23/10
Inspector: JR

File No.: 16
Licensee: Northeast Louisiana Cancer Center
License No.: LA-10206-L01 (AI# 36565)
Inspection Type: Routine, Announced
Priority: 2
Inspection Date: 4/13/11
Inspector: JG

File No.: 17
Licensee: Teche Regional Medical Center
License No.: LA-0571-L01 (AI# 34247)
Inspection Type: Routine, Unannounced
Priority: 2
Inspection Date: 5/18/10
Inspector: JB

File No.: 18
Licensee: Acuren Inspection, Inc.
License No.: LA- 7072-L01 (AI# 126755)
Inspection Type: Routine, Unannounced
Priority: 1
Inspection Date: 3/08/12
Inspector: JR

File No.: 19
Licensee: Combined Technical Services
License No.: LA-7125-L01A (AI# 39006)
Inspection Type: Routine, Unannounced
Priority: 3
Inspection Date: 9/15/10
Inspector: KJ

File No.: 20
Licensee: Slidell Memorial Hospital
License No.: LA-0783-L02 (AI# 2970)
Inspection Type: Routine, Unannounced
Priority: 2
Inspection Date: 2/24/10
Inspector: MM

File No.: 21
Licensee: Southern Valve Service, Inc.
License No.: LA-10608-L01 (AI # 12340)
Inspection Type: Routine, Unannounced
Priority: 4
Inspection Date: 11/29/11
Inspector: JR

File No.: 22
Licensee: Alliance Imaging, Inc.
License No.: LA-10598-L01 (AI# 86657)
Inspection Type: Routine, Unannounced
Priority: 1
Inspection Date: 5/15/09
Inspector: KJ

File No.: 23
Licensee: Southeastern Louisiana University
License No.: LA-2574-L01 (AI# 5101)
Inspection Type: Routine, Announced
Priority: 3
Inspection Date: 1/06/11
Inspector: MM

File No.: 24
Licensee: Gamma-Tron Services, Inc.
License No.: LA-4895-L01 (AI# 38912)
Inspection Type: Initial, Unannounced
Priority: 2
Inspection Date: 10/31/08
Inspector: RC

File No.: 25
Licensee: Louisiana State University
License No.: LA-0001-L01 (AI# 5540)
Inspection Type: Special, Announced
Priority: 1
Inspection Date: 2/14/12
Inspectors: MC, JN

INSPECTOR ACCOMPANIMENTS

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

Accompaniment No.: 1
Licensee: Ochsner Clinic Foundation License No.: LA-0002-L01 (AI # 3043)
Inspection Type: Routine, Announced/Special Priority: 1
Inspection Date: 3/19/12 Inspector: GM

Accompaniment No.: 2
Licensee: Source Production and Equipment Co. License No.: LA-2966-L01 (AI# 38844)
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 3/20/12 Inspector: KJ

Accompaniment No.: 3
Licensee: Open Air MRI of Cen-LA License No.: LA-10218-L01 (AI# 156084)
Inspection Type: Routine, Announced Priority: 3
Inspection Date: 3/21/12 Inspector: JE

Accompaniment No.: 4
Licensee: Capitol Ultrasonics License No.: LA-5838-L01 (AI# 12540)
Inspection Type: Routine, Unannounced/Special Priority: 1
Inspection Date: 3/22/12 Inspector: RC

Accompaniment No.: 5
Licensee: Weatherford License No.: LA-4413-L01 (AI# 127801)
Inspection Type: Routine, Announced Priority: 3
Inspection Date: 3/23/12 Inspector: JF

APPENDIX D

LICENSE CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1
Licensee: Code Inspection & Testing Co. South — License No.: LA-12071-L01
Type of Action: New — Amendment No.: 0
Date Issued: 2/13/09 — License Reviewer: JR

File No.: 2
Licensee: Desert Industrial X-Ray, LP — License No.: LA-12285-L01
Type of Action: New — Amendment No.: 0
Date Issued: 4/26/10 — License Reviewer: MB

File No.: 3
Licensee: Waggoner Services, Inc. — License No.: LA-11860-L01
Type of Action: New — Amendment No.: 0
Date Issued: 3/5/09 — License Reviewer: BS

File No.: 4
Licensee: Louisiana State University — License No.: LA-0001-L01
Type of Action: Amendment — Amendment No.: 37
Date Issued: 4/14/10 — License Reviewer: MB

File No.: 5
Licensee: Tulane University Health Sciences Center — License No.: LA-0004-L01
Type of Action: Renewal — Amendment No.: 53
Date Issued: 12/16/11 — License Reviewer: KR

Comment:
File contained insufficient information to follow reviewer's determination process for authorizing the licensing action.

File No.: 6
Licensee: LSU Health Sciences Center/Shreveport — License No.: LA-0005-L01
Type of Action: Renewal — Amendment No.: 120
Date Issued: 12/6/11 — License Reviewer: KR

Comment:
Radiation Safety Committee Chair was not authorized.

File No.: 7
Licensee: Cardinal Health 414, Inc. License No.: LA-10217-L01
Type of Action: Renewal Amendment No.: 24
Date Issued: 4/24/08 License Reviewer: BS

Comment:
Authorized U-235 in lieu of depleted uranium for shielding.

File No.: 8
Licensee: PETNET Solutions, Inc. License No.: LA-10505-L01
Type of Action: Renewal Amendment No.: 22
Date Issued: 10/22/09 License Reviewer: KR

File No.: 9
Licensee: Touro Infirmary License No.: LA-1198-L01
Type of Action: Amendment Amendment No.: 36
Date Issued: 8/5/11 License Reviewer: KR

File No.: 10
Licensee: Terrebonne General Medical Center License No.: LA-2762-L01
Type of Action: Amendment Amendment No.: 52
Date Issued: 1/29/10 License Reviewer: KR

File No.: 11
Licensee: Loyola University License No.: LA-0014-L01
Type of Action: Termination Amendment No.: 26
Date Issued: 10/16/08 License Reviewer: BS

File No.: 12
Licensee: Source Production & Equipment Company, Inc. License No.: LA-2966-L01
Type of Action: Amendment Amendment No.: 59
Date Issued: 2/8/11 License Reviewer: JR

Comment:
File contained insufficient information to follow reviewer's determination process for authorizing the licensing action.

File No.: 13
Licensee: Source Production & Equipment Company, Inc. License No.: LA-2966-L01
Type of Action: Amendment Amendment No.: 61
Date Issued: 3/11/11 License Reviewer: JR

File No.: 14
Licensee: Ochsner Medical Center Baton Rouge License No.: LA-5088-L01
Type of Action: Amendment Amendment No.: 29
Date Issued: 10/14/10 License Reviewer: KR

File No.: 15
Licensee: Ochsner Medical Center - Kenner, LLC License No.: LA-5162-L01
Type of Action: Amendment Amendment No.: 35
Date Issued: 3/9/10 License Reviewer: KR

File No.: 16
Licensee: Sterling Sugars, Inc. License No.: LA-4665-L01
Type of Action: Amendment Amendment No.: 11
Date Issued: 5/20/10 License Reviewer: BS

File No.: 17
Licensee: Mary Bird Perkins Cancer Center License No.: LA-2651-L01
Type of Action: Amendment Amendment No.: 89
Date Issued: 7/5/11 License Reviewer: KR

Comment:
Authorized two medical physicists based on ABR computer generated oral board results in lieu of the ABR board certificate.

File No.: 18
Licensee: Women's Hospital Foundation License No.: LA-2338-L01
Type of Action: Amendment Amendment No.: 27
Date Issued: 8/16/10 License Reviewer: MB

File No.: 19
Licensee: Mary Bird Perkins Cancer Center License No.: LA-2651-L01
Type of Action: Amendment Amendment No.: 90
Date Issued: 11/1/11 License Reviewer: KR

File No.: 20
Licensee: Lake Charles Memorial Hospital License No.: LA-0575-L01
Type of Action: Renewal Amendment No.: 68
Date Issued: 6/24/10 License Reviewer: MB

File No.: 21
Licensee: Warrior Energy Services Corp. License No.: LA-10011-L01
Type of Action: Renewal Amendment No.: 16
Date Issued: 3/31/10 License Reviewer: BS

File No.: 22
Licensee: BioLab Facility License No.: LA-10387-L01
Type of Action: Renewal Amendment No.: 4
Date Issued: 3/4/09 License Reviewer: BS

File No.: 23
Licensee: Kiewit Louisiana Company
License No.: LA-12214-L01
Type of Action: Amendment
Amendment No.: 1
Date Issued: 11/4/10
License Reviewer: MB

File No.: 24
Licensee: Seaboard Wireline, Inc.
License No.: LA-11728-L01
Type of Action: Termination
Amendment No.: 3
Date Issued: 2/20/09
License Reviewer: BS

APPENDIX E

INCIDENT CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1
Licensee: Mary Bird Perkins Cancer Center — License No.: LA-2651-L01
Date of Incident: 12/23/08 — NMED No.: 090094
Investigation Date: 1/15/09 — Type of Incident: Medical Event
Type of Investigation: Site

File No.: 2
Licensee: Hill Brothers Construction — License No.: MS-520-01
Date of Incident: 3/26/09 — NMED No.: 090407
Investigation Date: 3/31/09 — Type of Incident: Damaged Portable Gauge
Type of Investigation: Site

File No.: 3
Licensee: Cameron Valves & Measurement — License No.: LA-7095-L01
Date of Incident: 7/28/09 — NMED No.: 090689
Investigation Date: 7/31/09 — Type of Incident: Radiography Source Disconnect
Type of Investigation: Site

File No.: 4
Licensee: Accurate NDE & Inspection — License No.: LA-10207-L01
Date of Incident: 7/31/09 — NMED No.: 090751
Investigation Date: 9/25/09 — Type of Incident: Personnel Overexposure
Type of Investigation: Site

File No.: 5
Licensee: Westlake Polymers, LLC — License No.: LA-5404-L01
Date of Incident: 12/07/09 — NMED No.: 100043
Investigation Date: 12/10/09 — Type of Incident: Fixed Gauge Shutter Failure
Type of Investigation: Site

File No.: 6
Licensee: Mary Bird Perkins Cancer Center — License No.: LA-2651-L01
Date of Incident: 3/12/10 — NMED No.: 100219
Investigation Date: 5/28/10 — Type of Incident: Medical Event
Type of Investigation: Site

File No.: 7
Licensee: Accurate NDE & Inspection — License No.: LA-10207-L01
Date of Incident: 12/01/11 — NMED No.: 120154
Investigation Date: 3/05/12 — Type of Incident: High Dosimeter Result
Type of Investigation: Site

File No.: 8
Licensee: Shaw Sunland Fabricators, Inc. — License No.: LA-3462-L01
Date of Incident: 3/15/12 — NMED No.: 120184
Investigation Date: 3/16/12 — Type of Incident: Facility Fire
Type of Investigation: Site

APPENDIX F

SEALED SOURCE AND DEVICE CASEWORK REVIEWS

File No: 1
Registry No: LA-612-D-114-S SS&D Type: (A) Industrial Radiography
Date Issued: 11/25/09 Type of Action: Amendment
Distributor: Source Production & Equipment Company, Inc. Reviewers: JP, JR
Type of Device: Industrial Radiography Source Assembly
Model Number: G-80 Series, G-80 548 Series, G-80 741 Series

Comments:

a) Review and concurrence date 11/25/09 does not agree with Page 1 date of 10/26/09 as the format described in NUREG 1556 Vol 3 Rev.1 Appendix D.
b) Leak test frequency on Page 1 indicates testing "During fabrication final inspection, then every six months" instead of "Six months." Does not follow format described in NUREG 1556 Vol 3 and comments regarding leak testing during the manufacturing process belong in the Quality Control and Quality Assurance Section.
c) Document dated 1/24/2000 in reference section could not be located.
d) Document listed in the reference section as "letter dated September 29, 2009" is actually dated 9/28/09. The document was received on 9/29/09.

File No: 2
Registry No: LA-0612-D-111-S SS&D Type: (A) Industrial Radiography
Date Issued: 1/11/11 Type of Action: Amendment
Distributor: Source Production & Equipment Company, Inc. Reviewers: JP, AT

Type of Source: Radiographic Exposure Device.
Model Number: SPEC 150

Comments:

a) Issuance date of 1/18/11 on signature page 10 does not agree with the page 1 date of 1/11/11 as described in NUREG 1556 Vol 3 Rev.1 Appendix D.
b) Document listed in the reference section as "letter dated November 04, 2010" is actually dated 10/4/10. The document was received on 11/4/10.
c) NRC SS&D website does not list this 1/11/11 revision. This revision was not identified on the IMPEP questionnaire.

File No: 3
Registry No: LA-0612-S-116-S SS&D Type: (AA) Manual Brachytherapy
Date Issued: 6/25/09 Type of Action: NEW
Applicants Name: Source Production & Equipment Company, Inc. Reviewers: JR, JP
Type of Device: Brachytherapy Source
Model Number: SPEC Model M-31

Comments:

a) Issuance and concurrence date 6/29/09 does not agree with Page 1 date of 6/25/09 as the format described in NUREG 1556 Vol 3 Rev.1 Appendix D.
b) Limitations section use uses the word “should” in items 3, 5, 6, and 7 instead of “shall” which places the limitation on the use.
c) A statement that the sources are sent as non-sterile needs to be added to the “Limitations” section along with a statement to that they shall follow the manufacturer’s instructions for sterilization and list with the maximum temperature and pressure.
d) The reference section does not include the phrase that “The following supportive documents are hereby incorporated by reference and are made part of this registry document.” As described in NUREG 1556 Vol 3 Rev.1 Appendix D.
e) Details not provided on the manufacturer’s instrumentation used, its calibration or procedures followed to determine the activity of Ytterbium 169.

File No: 4
Registry No: LA-1281-D-801-S SS&D Type: (AC) Photon-emitting Remote Afterloader
Date Issued: 7/21/09 Type of Action: Inactive Amendment
Distributor: Oncology Systems Reviewers: JR, AT
Type of Device: Remote Afterloading Brachytherapy Unit
Model Number: AccuSource 1000

Comment:

The first page information section of the registration incorrectly indicates the use as “(V) General Medical” instead of “(AC) Photon-emitting Remote Afterloaders” and the FDA Approval Summary was not included in the registration.

File No: 5
Registry No: LA-612-D-106-S SS&D Type: (A) Industrial Radiography
Date Issued: 10/21/10 Type of Action: Amendment
Distributor: Source Production & Equipment Company, Inc. Reviewers: JR, JP
Type of Device: Industrial Radiography Source Assembly
Model Number: “T” Series

Comments:

a) Concurrence date 11/16/10 is past the 10/21/09 date identified on Page 1 and the signature page.

b) The first page information section of the registration incorrectly indicates the use as Industrial Radiography" instead of "(A) Industrial Radiography" as required by NUREG 1556 Vol 3 Rev. 1.
c) The External Radiation Level Section does not provide measured or calculated radiation levels of a for each isotope with the maximum activity allowed at distances of 0, 5, 30 and 100 centimeters as described in NUREG 1556 Vol 3 Rev.1.
d) Multiple documents between 1988 and 1994 listed in the reference section that are incorporated by reference could not be located.

File No: 6
Registry No: LA-612-D-105-S SS&D Type: (A) Industrial Radiography
Date Issued: 10/21/10 Type of Action: Amendment
Distributor: Source Production & Equipment Company, Inc. Reviewers: JR, JP
Type of Device: Industrial Radiography Source Assembly
Model Number: "G" Series

Comments:
a) Issuance date of 10/21/10 on signature page 6 does not agree with the page 1 date of 10/18/10 as described in NUREG 1556 Vol 3 Rev.1 Appendix D.
b) The concurrence date 11/16/10 is past the issuance date 10/21/10 on page 1.
c) The External Radiation Level Section does not provide measured or calculated radiation levels of a for each isotope with the maximum activity allowed at distances of 0, 5, 30 and 100 centimeters as described in NUREG 1556 Vol 3 Rev.1.
d) Multiple documents between 1979 and 1995 listed in the reference section that are incorporated by reference, to include the original application and deficiency replies could not be located.
e) Applicant submitted the following revisions that were reviewed and approved but were not added to the Reference Section. Registration Application Revision (1) dated 10/1/96, letter dated 3/25/97. The amendment in its entirety did not incorporate changes and remove outdated procedures as required by NUREG 1556 Vol 3 Rev. 1.

File No: 7
Registry No: LA-0577-S-802-S SS&D Type: (AA) Manual Brachytherapy
Date Issued: 6/10/08 Type of Action: Inactivation Amendment
Distributor: RADS S.L., Inc. Reviewers: JP, AT
Type of Source: Brachytherapy Source
Model Number: SL-77HS

Comment:
a) The first page information section of the registration still incorrectly indicates the use as "(V) General Medical" instead of "(AA) Manual Brachytherapy." While this is an inactivation, NUREG 1556 Vol 3 Rev.1 requires inactivation to formatted to standards and contain the most current and correct information.
b) Page 1 list the isotope as "Iridium-I 92" instead "Iridium-192."

c) The incorporated by reference letter dated 5/25/88 in the Reference Section could not be found.

File No: 8
Registry No: LA-612-D-102-U SS&D Type: (A) Industrial Radiography
Date Issued: 5/5/08 Type of Action: Amendment
Distributor: Source Production & Equipment Company, Inc. Reviewers: JP, AT
Type of Device: Industrial Radiography Source Changer
Model Number: C-1

Comments:

a) The SS&D number in the header section contains the designation "U" for unknown license type. This designation should have been changed to "S" for specific license when the registry was amended in its entirety.
b) The first page information section of the registration incorrectly indicates the use as Industrial Radiography" instead of "(A) Industrial Radiography" as required by NUREG 1556 Vol 3 Rev. 1
c) The reference section does not include the phrase that "The following supportive documents are hereby incorporated by reference and are made part of this registry document." as described in NUREG 1556 Vol 3 Rev.1 Appendix D.

File No: 9
Registry No: LA-612-S-806-S SS&D Type: (AC) Photon-emitting Remote Afterloader
Date Issued: 10/7/08 Type of Action: Inactive Amendment
Distributor: Source Production & Equipment Company, Inc. Reviewers: JP, AT
Type of Device: Brachytherapy Source
Model Number: SPEC Model M-19 Source Assembly

Comment:

a) The issuance and concurrence date 10/7/08 does not agree with Page 1 date of 8/7/09 as the format described in NUREG 1556 Vol 3 Rev.1 Appendix D.
b) The reference section does not include the phrase that "The following supportive documents are hereby incorporated by reference and are made part of this registry document." as described in NUREG 1556 Vol 3 Rev.1 Appendix D.

ATTACHMENT(S)

June 25, 2012 Letter from Tim B. Knight
Louisiana Response to the Draft Report
ADAMS Accession No.: ML12178A015

BOBBY JINDAL
GOVERNOR

PEGGY M. HATCH
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL COMPLIANCE

June 25, 2012

Bryan A. Parker, IMPEP Team Leader
United States Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

RE: Response to IMPEP Review

Dear Mr. Parker:

We have received the copy of the 2012 IMPEP draft report that you provided. We reviewed the report and thank you for the opportunity to comment prior to your submitting the report to the Management Review Board. We appreciate what an arduous task it was for you as team leader to review four years of documentation for an entire state program.

The LDEQ Radiation Section was happy to cooperate with you and your team and appreciated that you tried to make the process as painless as possible. They have worked extremely hard for the last four years and were gratified to hear in your exit interview that you were recommending that the Louisiana Agreement State Program be found adequate to protect health and safety and compatible with NRC's program.

The following are comments we have with regard to the draft team report. In Section 2.0, Status of Items Identified in Previous Reviews, Item # 2, you recommend that the State adhere to the document format and content guidance in the current version of NUREG-1556, Volume 3. We are now following that guidance and have submitted ten Sealed Source and Device (SS&D) registrations to Traci Kime to be placed into the NRC Registry of Radioactive Sealed Sources and Devices. Nine of those ten registrations were evaluated by the review team and were found lacking in format and content. They have now been deemed acceptable. We have approximately 51 SS&D registrations left in our files that need to be thoroughly examined for compliance with the guidance document. We propose to accomplish this feat at the aggressive rate of approximately one registration per week, with a targeted completion date of July 1, 2013.

In Section 3.1, Technical Staffing and Training, the need for a documented training plan was mentioned. The paragraph below outlines the training policy for license writers. Attachment A is the eight-page training policy for surveillance inspectors.

Training Policy for Radiation License Writers

This policy states the training order for new Radiation License Writers. A new radiation license writer will begin by learning to process X-Ray Registrations or conduct the Industrial Radiography exam. The next step is to progress to training on Industrial Licenses for nuclear gauges, followed by training on Diagnostic Medical licenses. The next training step involves two paths. The first path is the medical training path. Here the training progresses from Radiopharmacy, to Therapy and finally to Cyclotrons. The second path is the industrial training path. Here the training progresses from Industrial Radiography to Well Logging. The training documentation will be maintained on the "Employee Radiation Training" form for each employee. The Registration and Licensing Supervisor reserves the right to alter the training schedule or job duties, if deemed necessary.

In Section 3.3, Technical Quality of Inspections, we request that the term "Notice of Deviation (NOD)" be changed to "Notice of Deficiency (NOD)", to reflect the terminology used by the department.

In Section 3.4, Technical Quality of Licensing Actions, the review team recommended that the Department evaluate its review processes and develop and implement a methodology to ensure that products issued are of high technical quality and meet the standard expectations of the Department. We have reiterated the importance of the review process with all of the affected employees. The initial license writer is responsible for accurately creating or amending the original license using the appropriate guidance documents. The peer reviewer is responsible for thoroughly checking all license conditions for accuracy and applicability, as well as reviewing any changes made. The supervisor/manager review consists of a routine review for correct formatting, names, addresses, the changes being made, license number, agency interest number, and amendment number. The technical staff reviewer is responsible for completing a comprehensive technical review of the entire license and supporting documents.

While the IMPEP review team was onsite, the Department developed the following policy for the control of sensitive information. This includes adding "Official Use Only – Security Related Information" in red ink on the top of each page of Increased Control licenses. This policy was immediately implemented and is now in use. See Attachment B for an example.

Policy for Controlling Sensitive Information

This policy applies to documents having radioactive material with quantities of concern. When a new license application or amendment request is received for Increased Control licenses, the documents are placed in an "Increased Controls" envelope and secured from inadvertent disclosure. The documents will remain in the "Increased Controls" envelope when not being reviewed. The "Increased Controls" envelope will be used while routing the documents for review. The security sensitive information will be removed by the Registration and Licensing Supervisor and placed in the "Increased Controls" cabinet. The Radioactive Materials Licenses that have Increased Control quantities will have "Official Use Only – Security Related Information" put on the top of the first page.

In Section 3.5, Technical Quality of Incident and Allegation Activities, it should be noted that on May 15, 2012, Louisiana hosted an NMED training session for two Mississippi Department of Health employees and six Louisiana DEQ employees. This will further enhance our abilities to effectively report incidents and allegations.

In Section 4.1.2, Program Elements Required for Compatibility, it appears that a correction to the Federal Register notice may be necessary. We believe that the citation for RATS ID 2000-1, "Energy Compensation Sources for Well Logging and Other Regulatory Clarifications," 10 CFR Part 39 amendment (65 FR 63750) should read (65 FR 20337).

Of the twelve amendments that have not been reviewed by the NRC as final regulations and are considered overdue, three were reviewed by the NRC as proposed rules and the NRC had no comments. These rules have since been promulgated by DEQ as final rules, which correspond to RATS ID 1991-3, "Standards for Protection Against Radiation", 10 CFR Part 20 amendment (56 FR 23360) (56 FR 61352) (57 FR 38588) (57 FR 57877) (58 FR 67657) (59 FR 41641) (60 FR 20183), RATS ID 1993-1, "Decommissioning Recordkeeping and License Termination: Documentation Additions," 10 CFR Parts 30 and 40 amendments (58 FR 39628), and RATS ID 1996-3, "Termination or Transfer of Licensed Activities: Recordkeeping Requirements," 10 CFR Parts 20, 30, 40, 61, and 70 amendments (61 FR 24669). These three final rules will be submitted to the NRC for review within 30 days.

Five amendments were reviewed as final rules; however, the NRC had comments on them. These five amendments, which correspond to RATS ID 1997-5, "Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiography Operations", Parts 30, 34, 71 and 150 amendments (62 FR 28947); RATS ID 1998-5, "Minor Corrections, Clarifying Changes, and a Minor Policy Change," 10 CFR Parts 20, 35, and 36 amendments (63 FR 39477; 63 FR 45393); RATS ID 2001-1, "Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material," 10 CFR Parts 30, 31, and 32 amendments (65 FR 79162); RATS ID 2006-1, "Minor Amendments", 10 CFR Parts 20, 30, 32, 35, 40 and 70 amendments (71 FR 15005); and RATS ID 2007-1, "Medical Use of Byproduct Material – Minor Corrections and Clarifications," 10 CFR Parts 32 and 35 amendments (72 FR 45147, 72 FR 54207), will be addressed in a future rulemaking within the next six months.

Rulemaking documents equivalent to RATS ID 2007-2, "Exemptions From Licensing, General Licenses, and Distribution of Byproduct Material: Licensing and Reporting Requirements," 10 CFR Parts 30, 31, 32, and 150 amendments (72 FR 58473) and RATS ID 2008-1, "Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent," 10 CFR Parts 19 and 20 amendments (72 FR 68043) will be published as proposed rules in the July 20, 2012, edition of the *Louisiana Register*. These rules are expected to be published as final rules in the September 20, 2012, edition of the *Louisiana Register*.

A rule equivalent to RATS ID 2007-3, "Requirements for Expanded Definition of Byproduct Material," Parts 20, 30, 31, 32, 33, 35, 61, and 150 amendments (72 FR 55864) will be published as a proposed rule in the August 20, 2012, edition of the *Louisiana Register* and a final rule expected in the October 20, 2012, edition.

The last rule that is considered overdue, which is equivalent to RATS ID 1991-4, "Notification of Incidents," 10 CFR Parts 20, 30, 31, 34, 39, 40, and 70 amendments (56 FR 64980), was apparently never submitted to the NRC for review. However, it was promulgated as a final rule on June 30, 1995 and will be submitted to the NRC for review within 30 days.

Four NRC amendments will need to be addressed in upcoming rulemakings before their stated deadlines. One of those, corresponding to RATS ID 2009-1, "Medical Use of Byproduct Material – Authorized User Clarification," 10 CFR Part 35 amendment (74 FR 33901), will be published as a proposed rule in the August 20, 2012, edition of the *Louisiana Register* and a final rule expected in the October 20, 2012, edition.

The timeline established on new rule packages is contingent upon receiving no comments. If comments are received, we would need to add time to address the comments in whatever fashion is appropriate. As you can see, we are making a concerted effort to rectify compatibility issues.

In Section 4.2.1, Technical Staffing and Training, a minor correction is needed in the second sentence of the second paragraph. Three of the four qualified reviewers with full signature authority each have greater than 10 years of experience with the department; the other one (Jabari Robinson) has five years of experience.

In response to comments in Section 4.2.2, we are thoroughly reviewing our entire Sealed Source and Device program. We are currently operating consistent with the format and content recommendations in NUREG-1556, Volume 3. As mentioned previously, the nine SS&D registrations that the review team evaluated have all been revised and resubmitted for posting to the NRC's SS&D Registry. All of the SS&D registrations and associated files are housed in a separate, locked filing cabinet. These files are currently being examined for accuracy and completeness. The projected completion date for this project is July 1, 2013.

We understand the Management Review Board will make a final determination at their July 12, 2012 meeting. I look forward to attending the meeting and appreciate the NRC providing travel expenses. Please feel free to contact Judith A. Schuerman, Ph.D., at 225-219-3634 to make further arrangements for travel to the meeting or for teleconferencing.

Sincerely,

Tim B. Knight, Administrator
Assessment Division

jas

Attachments

Attachment A

Training Policy for Radiation License Writers

Training Policy of Surveillance Personnel within the Radiation Surveillance Section:

PURPOSE: To ensure that those individuals performing radioactive materials inspection activities are adequately qualified and trained in a reasonable period of time to perform their duties.

Inspector training will be on-going through the duration of the inspector's tenure and will consist of three basic components: 1) basic inspector training, 2) program-specific training and 3) health and safety training. Basic inspector training may be achieved by attendance at one of the NRC sponsored training courses. Until the opportunity for this formalized training, an inspector may gain this training through the tutelage and accompaniment of a senior inspector that has been adequately trained and has demonstrated a proficiency in the subject inspection field. Such in-house training will continue until the inspector has demonstrated proficiency of inspection procedures to the satisfaction of senior inspection staff and the Management.

Health and safety training is accomplished internally at the LDEQ through the attendance of 40 hour HAZWOPER training and subsequent 8 hour annual refresher courses. Radiation safety training will be learned under the tutelage of a senior inspector until formal radiation safety training courses can be taken.

PROCEDURE: The training program begins with each inspector working in the X-ray inspection program. The inspector will remain in this program for approximately 1-2 years before progressing to the RAM inspection program. Exceptions to this include those individuals that possess prior ionizing radiation regulatory experience and/or those individuals that possess a degree in nuclear science, nuclear engineering, medical physics, nuclear medicine or another degree in the field of radioactive material and ionizing radiation. The new RAM inspector will begin training in the medical area with inspection of nuclear medicine departments. Several facilities are inspected by the trainer and the new inspector prior to the new inspector attending a formal classroom nuclear medicine course. Upon completion of the class the inspector again works with the trainer until both feel he is ready to conduct these type inspections unassisted. At that time the inspector is accompanied by an DCL for a "check ride" and depending on his performance is either approved or disapproved for unassisted inspection in nuclear medicine. After the inspector has satisfactorily completed several nuclear medicine inspections, he/she progresses to cancer treatment centers to begin training in HDR units and RAM implant licensee inspections. Upon completion of his/her OJT and classroom training in brachytherapy the inspector is given a "check ride" before being allowed to conduct these inspections unassisted. The training for the inspection of PET units and eye applicators usually consists of OJT only and a "check ride" is not normally required.

After completion of the medical licensee training the inspector is next moved into the industrial licenses beginning with nuclear gauges, fixed and portable. The training is by OJT alone except when the opportunity to attend one of the industry nuclear gauge classes is made available. After completion of the OJT another "check ride" by an DCL is made. This process of accompanying a trainer, attending a formal class if available for the type of inspection, again accompanying a trainer, and receiving a "check ride" from a DCL continues throughout each step in the inspector training. After adequate experience is

obtained in the inspection of nuclear gauges the inspector is moved into well logging and then into industrial radiography. The RAM training process from the beginning with nuclear medicine to the completion of industrial radiography takes about three years with some inspectors completing the training a little sooner and some taking a little longer.

APPENDICES:

The progression of the inspector through the Ram training process is listed in chronological order in which the inspector would attend the training. (see attachment A)

The RAM inspector will attend the formal core courses. (see attachment B)

Required Inspection Training/Duration of Inspections (see attachment C)

Employee Training Qualification Form (see attachment D)

ATTACHMENT A

PROGRESSION OF THE INSPECTOR THROUGH THE RAM TRAINING

(LISTED IN SEQUENTIAL ORDER)

Medical Series:

Nuclear Medicine
PET, Eye application
Brachytherapy

Industrial Series

Nuclear gauges
Academic, GC's
Well logging
Industrial radiography, office and field

ATTACHMENT B

FORMAL CORE COURSES

(LISTED IN SEQUENTIAL ORDER)

Introductory Health Physics H-117	1 week
Fundamental Health Physics I&II H-122	2 weeks
Fundamental Health Physics III	1 week
Advanced Health Physics H-201	2 weeks
Nuclear Medicine H-304	1 week
Brachytherapy H-313	1 week
Inspection Procedure G-108	1 week
Transportation H-308	1 week
Increased Controls S-201	1 week
Well Logging H-314	1 week
Industrial Radiography H-305	1 week

ATTACHMENT C

REQUIRED INSPECTION TRAINING / DURATION OF INSPECTIONS

X-ray (Dental) Inspections	80 – 100
Radiographic Dental	6 mos. – 1 yr.
Doctor & Chiropractors	3 mos. - 4mos.
Hospital Fluoro	8 mos. – 1 yr.
Nuclear Gauge	3 mos. – 4 mos.
Industrial Radiography	After attending class
Well Logging	After attending class
RAM (Nuclear Medl)	6 mos. – 1 yr.
Teletherapy and Brachytherapy	3 mos. – 4 mos.

ATTACHMENT D

Employee Training Qualification Form

Employee: _____ Hiring Date: _____ Perm. Date: _____

DEQ Orientation Date: _____ DEQ Procedure Date: _____

DEQ Timekeeping Date: _____ PPR with Supervisor: _____

HAZMAT 40 hour training: _____

X-RAY

Dental

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Demonstration Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

Radiographic (Dr's, vets, chiropractors, etc.)

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Demonstration Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

Multi-Specialty (Clinics & Out Patient)

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Demonstration Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

Major Medical Facilities (Hospitals, Special Procedures, Etc)

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Demonstration Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

Mammography

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Training Course. Course 1 _____ Course 2 _____ Course 3 _____

Demonstration Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

Accelerators and Misc.

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Demonstration Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

RAM

G.C., In-Vitro, Eye Applicators, Consultants, Etc.

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Demonstration Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

Fixed and Moisture/Density Gauges

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Training Course: _____ Date: _____

Demonstration Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

Nuclear Medicine & Therapy

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Training Course: Diagnostic & Therapeutic Nuclear Medicine (H-304) Date: _____

Demonstration Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

Nuclear Pharmacies

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Training Course: _____ Date: _____

Demonstration Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

Industrial Radiography

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Training Course: Safety Aspects of Industrial Radiography (H-305) Date: _____

Office Demo Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Office Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Field Demo Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Field Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

Well Logging

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Training Course: Safety Aspects of Well Logging (H-314) Date: _____

Office Demo Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Office Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Field Demo Inspections: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Field Inspections Performed: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Training Instr: _____ Approval Date: _____

Broad Scope and Manufacturers

Regulations Review Date: _____ Inspection Documentation Review Date: _____

Training Course: _____ Date: _____

Attachment B

Example of a License With Security Sensitive Information

Official Use Only-Security Related Information

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL COMPLIANCE
RADIATION LICENSING
P.O. BOX 4312
BATON ROUGE, LOUISIANA 70821-4312

RADIOACTIVE MATERIAL LICENSE

Pursuant to the Louisiana Environmental Quality Act (Louisiana Revised Statutes 30:2101 et seq.) and the Louisiana Radiation Regulations, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, own, possess and transfer radioactive material for the purpose(s) and at the place(s) designated below. This license shall be deemed to contain the conditions specified in the Louisiana Revised Statutes 30:2105 of the Louisiana Nuclear Energy and Radiation Control Law, and is subject to all applicable rules, regulations, and orders of the Department now or hereinafter in effect, including the Louisiana Radiation Regulations (LAC 33:XV) and to any condition specified in the license.

LICENSEE	LICENSE NUMBER	EXPIRATION DATE
Company X 111 X Street Baton Rouge, LA 70820 Attention: Mr. X Corporate Radiation Safety Contact	LA-XXXX-L01	March 31, 2016
	PREVIOUS AMENDMENTS ARE VOID AMENDMENT NUMBER 1	AI NUMBER 0000
	THIS LICENSE ISSUED PURSUANT TO AND IN ACCORDANCE WITH Letter	
	SIGNED BY Mr. X	DATE March 13, 2012

RADIONUCLIDE: ELEMENT	RADIONUCLIDE: MASS NO	MAXIMUM NUMBER OF SOURCES	MAXIMUM ACTIVITY OR QUANTITY PER SOURCE*	SEALED SOURCE IDENTIFICATION: CHEMICAL FORM—PHYSICAL STATE	SEALED CONTAINER OR EXPOSURE DEVICE: MANUFACTURER AND MODEL NO.	AUTHORIZED USE
Se	75	2	20 Ci	QSA Global Model 97941	QSA Global Model 989	Industrial Radiography
Se	75	6	80 Ci	AEA Technology Model A424-25W	AEA Technologies Model 660 System, 880 Delta, 880 Sigma, or 880 Elite	Industrial Radiography
Se	75	6	150 Ci	AEA Tehnology Model A424-25W	AEA Technologies Model 880 Delta, 880 Sigma, or 880 Elite	Industrial Radiography
Fe	55	10	40 mCi	AEA Model IEC.A1or IEC.D1	Niton XLi or XLp Series	X-Ray Fluorescence Analyzer
Cd	109	10	50 mCi	AEA Model CUC.D1		

*pCi-picocurie, µCi-Microcurie, mCi-Millicurie; Ci-Curie

	DATE	
XXXX Assistant Secretary		Page 1 of 2 Page(s)

LICENSEE	LICENSE NUMBER	AMENDMENT NUMBER	AI NUMBER	
Company X	LA-XXXX-L01	1	0000	Page 2 of 2 Page(s)

Isotope Products
Laboratories Model XFB-3,
Nes465 or Nes-467,
North American Scientific
Model IND 1602

Etc.