July 14, 2010

Roderick L. Bremby
Secretary of Health and Environment
Kansas Department of Health and Environment
Curtis State Office Building
1000 SW Jackson
Topeka, Kansas 66612

Dear Mr. Bremby:

The U.S. Nuclear Regulatory Commission (NRC) uses the Integrated Materials Performance Evaluation Program (IMPEP) in the evaluation of Agreement State programs. Enclosed for your review is the draft IMPEP report that documents the results of the Agreement State review held in Kansas during June 14-18, 2010. I was the team leader for the review. The review team's preliminary findings were discussed with you on the last day of the review. The review team's proposed recommendations are that the Kansas Agreement State Program be found adequate to protect public health and safety and compatible with NRC's program.

NRC conducts periodic reviews of Agreement State programs to ensure that public health and safety are adequately protected from the potential hazards associated with the use of radioactive materials and that Agreement State programs are compatible with NRC's program. The process, titled IMPEP, employs a team of NRC and Agreement State staff to assess Agreement State and NRC Regional radioactive materials programs. All reviews use common criteria in the assessment and place primary emphasis on performance. Three additional areas applicable to your program have been identified as non-common performance indicators and are also addressed in the assessment. The final determination of adequacy and compatibility of each program, based on the review team's report, is made by a Management Review Board (MRB) composed of NRC managers and an Agreement State program manager, who serves as a liaison to the MRB.

In accordance with procedures for implementation of IMPEP, we are providing you with a copy of the review team's draft report for your review and comment prior to submitting the report to the MRB. Comments are requested within 4 weeks from your receipt of this letter. This schedule will permit the issuance of the final report in a timely manner that will be responsive to your needs.

The team will review your response, make any necessary changes to the report, and issue it to the MRB as a proposed final report. Coordinating with your staff, I scheduled the Kansas MRB meeting for Tuesday, August 31, 2010, from 1:00 p.m. to 2:30 p.m. EDT. NRC will provide invitational travel for you or your designee to attend the MRB meeting at NRC Headquarters in Rockville, Maryland. NRC has video conferencing capability if it is more convenient for the State to participate through this medium. Please contact me if you desire to establish a video conference for the meeting.

If you have any questions regarding the enclosed report, please contact me at (817) 860-8151.

Thank you for your cooperation.

Sincerely,

/RA K. Meyer for/

Janine F. Katanic, Ph.D., CHP
Health Physicist
Division of Materials Safety and State Agreements
Office of Federal and State Materials
and Environmental Management Programs

Enclosure:
Draft Kansas IMPEP Report

cc w/encl.: Thomas A. Conley, CHP, Chief
Radiation, Asbestos, and Right to Know Section

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF THE KANSAS AGREEMENT STATE PROGRAM

JUNE 14-18, 2010

DRAFT REPORT

Enclosure

1.0 INTRODUCTION

This report presents the results of the review of the Kansas Agreement State Program. The review was conducted during the period of June 14-18, 2010, by a review team composed of technical staff members from the U.S. Nuclear Regulatory Commission (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 April 22, 2006, to June 18, 2010, were discussed with Kansas managers on the last day of the review.

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

The Kansas Agreement State Program is administered by the Radiation, Asbestos, and Right-to-Know Section (the Section), which is located within the Department of Health and Environment (the Department). Organization charts for the Section are included as Appendix B.

At the time of the review, the Kansas Agreement State Program regulated 300 specific licenses authorizing possession and use of byproduct, source and certain special nuclear 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 Kansas.

In preparation for the review, a questionnaire addressing the common and applicable non-common performance indicators was sent to the Section on February 12, 2010. The Section provided its response to the questionnaire on May 26, 2010. A copy of the questionnaire response can be found in NRC's Agencywide Documents Access and Management System (ADAMS) using the Accession Number ML101880154.

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

Section 2.0 of this report covers the State's actions in response to any 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 and recommendations. The review team's recommendations are comments that relate directly to program performance by the State. A response is requested from the State to all recommendations in the final report.

2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

During the previous IMPEP review, which concluded on April 21, 2006, the review team made two recommendations regarding the Kansas Agreement State Program's performance. One of the recommendations was carried over from the 2002 IMPEP review of the State.

1. The review team recommends that the State ensure that the Agreement Materials Program has adequate resources and an adequate complement of qualified staff. (Section 3.1 of the 2002 IMPEP report)

   Status: The State adopted a radiation control fee fund in 2004 that provides adequate resources for staffing of the Agreement State program. Although two individuals left the program during the current review period, two joined the program. At the time of the review, the Section was fully staffed with five technical staff members. Four of the current staff members were fully qualified inspectors/license reviewers and one was undergoing training. The individual going through training was qualified to independently inspect some types of licensed activities and was making steady progress toward full qualification. The review team concluded that, at the time of the review, the State had adequate resources and an adequate complement of qualified staff. This recommendation is closed.

2. The review team recommends that the State place greater emphasis and resource allocation towards reciprocity inspections in accordance with program goals and the criteria in NRC Inspection Manual Chapter (IMC) 1220, "Processing of NRC Form 241 and Inspection of Agreement State Licensees Operating Under 10 CFR 150.20." (Section 3.2 of the 2006 IMPEP report)

   Status: The review team found that the State devoted a significant amount of resources to perform inspections of licensees working under reciprocity during the review period. The Section's reciprocity inspection goals are equivalent to the requirements in IMC 1220, which requires inspection of 20 percent of candidate licensees operating under reciprocity annually. The review team found that the Section inspected 9 percent of candidate licensees in 2006, 16 percent in 2007, 28 percent in 2008, and 24 percent in 2009. These inspection activities have taken considerable effort given that: (1) many reciprocity licensees do not provide much advanced notice to the State when working in Kansas; (2) most perform licensed activities in geographically challenging areas, such as far west Kansas; and (3) licensed activities often occur during short windows and it can be difficult to reach the location in time to conduct an inspection. Although the State did not meet IMC 1220 goals in 2006 and 2007, they have shown steady improvement and exceeded IMC 1220 goals in 2008 and 2009. From January-May 2010, 18 licensees had filed for reciprocity and the State had performed 2 reciprocity inspections (11 percent). This recommendation is closed.

3.0 COMMON PERFORMANCE INDICATORS

Five common performance indicators are used to review NRC Regional and Agreement State radioactive materials programs. These indicators are: (1) Technical Staffing and Training,

(2) Status of Materials Inspection Program, (3) Technical Quality of Inspections, (4) Technical Quality of Licensing Actions, and (5) Technical Quality of Incident and Allegation Activities.

3.1 Technical Staffing and Training

Issues central to the evaluation of this indicator include the Section'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 Section's questionnaire response relative to this indicator, interviewed managers and staff, reviewed job descriptions and training records, and considered any possible workload backlogs.

During the review period, the Kansas Agreement State Program experienced an organizational realignment. At the time of the previous review, the Kansas Agreement State Program was located within the Bureau of Air and Radiation, which was part of the Division of Environment within the Department. On July 1, 2009, the entire Section was moved into the Bureau of Environmental Health within the Division of Health, which is still part of the Department. This realignment resulted in no staffing changes within the Section and was essentially a physical move that did not impact the day-to-day activities of the Section.

When fully staffed, the Kansas Agreement State Program is composed of a Section Chief, program support staff, and technical staff in the Radioactive Materials Licensing and Inspection Unit (the Unit). A Supervisor heads the Unit. Program support staff includes administrative professionals and a Regulatory Affairs and Training Coordinator. Technical staff in the Unit conducts inspections, performs licensing actions, and responds to incidents and allegations based on individual qualifications. The technical staff also has some emergency response duties regarding Kansas' operating nuclear power plant. Based on information provided by the Section, the review team estimated that the Section expends approximately 6.5 full-time equivalents (FTE) to administer the Agreement State program.

During the review period, two individuals left the Agreement State program and two individuals joined the program. Both of the individuals that joined the program were transfers from the State's asbestos program. The Section was fully staffed at the time of the review. As time and resources allow, the Section is cross-training four other individuals with the State's asbestos program and x-ray program to perform materials inspections and licensing actions. These efforts to "home-grow" current State employees provide some depth to the Section and has been a successful model for the Section to obtain timely, high-quality transfers from these programs when there were vacancies in the Section.

The Section has a documented training plan for technical staff that is consistent with the requirements in the NRC/Organization of Agreement States Training Working Group Report and IMC 1246, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area." In April 2010, the Section revised its training program. The training program was revised, in part, to better integrate the training program into the Section's new training database. The electronic database allows the Section Chief, the Unit Supervisor, and the Regulatory Affairs and Training Coordinator to track each employee's qualification status, as well as to monitor what formal training courses or on-the-job training the staff needs. The database also allows employees to see this information themselves and to keep track of coursework via a "transcript" of courses taken over their careers with the State.

The Section uses on-the-job training, mentoring, and inspector accompaniments to supplement formal coursework. Technical staff members are typically assigned increasingly complex duties as they progress through the qualification process. Technical staff members are authorized to perform regulatory duties independently after taking formal coursework and having on-the-job training in various program areas, such as industrial radiography, diagnostic nuclear medicine, or Increased Controls. After completion of formal coursework and on-the-job training in the individual program areas, the Unit Supervisor, in consultation with the Section Chief, assesses each individual's competency. Individuals are verbally informed by the Unit Supervisor or the Section Chief that they are qualified in an applicable program area. There is no formal written sign off on staff qualifications and, at the time of the review, this information was not being captured in the training database. The Section Chief and the Regulatory Affairs and Training Coordinator noted that they would be making enhancements to the database, including a more formal "approval of qualification" process wherein the Unit Supervisor and the Section Chief can electronically sign off or approve individuals in the various program areas.

As discussed in more detail in Sections 3.3 and 3.5, the review team identified weaknesses in the technical staff's evaluation of medical licensee performance against the requirements in 10 CFR Part 35 "Medical Use of Byproduct Material," which the State has adopted by reference. Based on information obtained from the inspection and incident casework evaluations, interviews with the Unit Supervisor and technical staff, and an inspection accompaniment by a review team member; the review team found a lack of familiarity with 10 CFR Part 35, especially with respect to therapeutic modalities involving sealed sources, devices, and unsealed materials. Examples of these modalities include high dose-rate remote afterloading (HDR) brachytherapy, temporary and permanent manual brachytherapy, gamma knife stereotactic radiosurgery, and therapy using iodine-131. In reviewing staff training records, the review team found that only one of the four qualified inspectors had taken NRC's formal course H-313, "Brachytherapy, Gamma Knife, and Emerging Technologies." One other technical staff member was scheduled to take an upcoming offering of the course.

In 2004, two of the qualified inspectors and the Unit Supervisor took a medical course that the Section Chief deemed equivalent to NRC's H-313 course. The review team noted that NRC's course is a 37-hour course and that the course taken by the Unit Supervisor and two members of the technical staff contained approximately 18 hours of formal classroom and laboratory demonstrations related to byproduct material use in medicine. Some portions of the course attended by the Section staff members also covered diagnostic nuclear medicine; therefore, only a portion of the total time related to therapeutic modalities involving sealed sources, devices, and therapeutic use of unsealed materials.

Because the more senior technical staff were not fully proficient in performing inspections of medical licensees, the more junior inspectors likely did not receive appropriate on-the-job training for reviewing 10 CFR Part 35-related requirements during inspections. As discussed in greater detail in Section 3.3, the review team determined that the Section's inspectors performed thorough reviews of requirements related to occupational radiation safety, inventories, receipt and transfer of materials, surveys, and postings; however, the inspectors did not place the appropriate emphasis on reviewing 10 CFR Part 35-related requirements for risk-significant activities involving therapeutic modalities. The review team recommends that the State ensure that inspectors gain increased familiarity with the regulations in 10 CFR Part 35, as well as be provided appropriate formal training in addition to mentoring and/or on-the-job

training to ensure familiarity with various therapeutic modalities involving byproduct materials such that these areas will be appropriately reviewed during inspections.

The review team noted that the Section Chief encourages and supports training opportunities based on program needs. During the review period, the Section hosted five NRC-sponsored courses, including G-108, "Licensing Practices," and G-109, "Inspection Procedures." The Section will be hosting an additional NRC-sponsored course later in 2010. Hosting the courses allows the State to have a higher number of attendees than they would normally be allotted for a course held at another location.

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

3.2 Status of Materials Inspection Program

The review team focused on five factors while reviewing this indicator: inspection frequency, overdue inspections, initial inspections of new licenses, timely dispatch of inspection findings to licensees, and performance of reciprocity inspections. The review team's evaluation was based on the Section's questionnaire response relative to this indicator, data gathered from the Section's licensing and inspection database, examination of completed inspection casework, and interviews with the Section Chief, the Unit Supervisor, and technical staff.

The review team determined that the Section's inspection frequencies for various license types are as frequent, or more frequent, than the NRC's inspection frequencies for similar license types listed in IMC 2800, "Materials Inspection Program." The Section requires more frequent inspections for a number of license categories. For example, the Section inspects medical broadscope programs, gamma knives, and nuclear pharmacies annually, whereas IMC 2800 prescribes a 2-year inspection frequency for these license types. The Section also inspects academic broadscope programs, research and development licenses, some medical licenses, and portable gauge licenses more frequently than prescribed in IMC 2800.

Based on the Section's questionnaire response, the review team evaluated the Section's performance with regards to Priority 1, 2, and 3 (per IMC 2800) and initial inspections. During the review period, out of 181 Priority 1, 2, and 3 inspections conducted the Section, 17 inspections were conducted overdue. The review team also evaluated the Section's timeliness for conducting initial inspections within 12 months after issuance of the new licenses. During the review period, the Section conducted 7 initial inspections, one of which was conducted overdue. As a result, the review team calculated that approximately 8.8 percent of Priority 1, 2, and 3 and initial inspections were performed overdue by more than 25 percent of the inspection frequency prescribed by IMC 2800. The review team noted that some technical staff members were new and undergoing training during the review period and that some of the staff was called away for several weeks to assist in the State's response to the aftermath of natural phenomena. The review team verified that there were no overdue Priority 1, 2, and 3 or initial inspections at the time of the review.

The review team evaluated the Section's timeliness in issuing inspection reports to licensees through a review of inspection casework and data obtained from the Section's licensing and inspection database. The review team noted that date of report issuance in the Section's

database differed from the actual inspection report issuance date. This occurs because the report generation template that the staff uses automatically prints the current date on the letterhead; however, the Unit Supervisor often does not review and approve the inspection reports until several days later. In order to obtain the actual inspection report issuance date, the staff had to manually search its inspection files for the date of supervisory approval. After obtaining this data, the review team calculated that approximately 11 percent of inspection reports were transmitted to licensees greater than 30 days after the inspection date. The Section Chief and the Unit Supervisor noted that they would enhance their database to develop a method to accurately date and record transmission of inspection reports to ensure timeliness.

The review team's evaluation of the Section's performance of reciprocity inspections is discussed under the status of Recommendation 2 from the 2006 IMPEP report in Section 2.0 of this report.

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

3.3 Technical Quality of Inspections

The review team evaluated inspection reports, enforcement documentation, inspection field notes, and interviewed the responsible technical staff for 31 radioactive materials inspections conducted during the review period. The casework examined consisted of inspections conducted by five current inspectors and two former inspectors who conducted inspections during the review period. The casework examined covered a variety of license types, including: academic broadscope, medical broadscope, industrial radiography, self-shielded irradiator, service provider, gamma knife, HDR, nuclear pharmacy, and fixed gauge. The review also included initial and follow-up Increased Controls, reciprocity, and decommissioning inspections. Appendix C lists the inspection casework files reviewed and includes case-specific comments.

Based on the evaluation of casework, the review team determined that inspections covered most aspects of the licensees' radiation safety and security programs. The majority of casework reviewed indicated thorough attention to areas of occupational radiation doses, inventories of licensed materials, radiation surveys, transfer and receipt of licensed materials, postings, and other areas relevant to radiation safety; however, the review team noted instances that inspection reports for certain medical licenses, were lacking documentation or indicated that certain risk-significant licensed activities were not adequately reviewed during the inspection. Through interviews with the technical staff, the review team confirmed that these activities were not routinely reviewed during inspections. For example, when inspecting a prostate implant brachytherapy program, the inspector would review source receipt and inventory, but not review written directives, post-implant dose determinations, or other items relevant to patient safety. Likewise, for HDR units, the staff would review source receipt, but not review implementation of safety precautions, calibration measurements, or requirements associated with written directives.

A review team member accompanied three of the Section's inspectors during April 19-21, 2010. The inspectors conducted inspections of a medical broadscope licensee, an industrial radiography licensee (office and temporary jobsite inspections), and a cyclotron production

licensee. The inspectors demonstrated appropriate performance-based inspection techniques and were well-prepared for the inspections. In general, the inspectors conducted interviews with appropriate personnel, observed licensed operations, conducted confirmatory measurements, utilized good health physics practices, and held entrance and exit meetings with the appropriate level of licensee management. Those portions of the inspections that focused on licensee radiation safety programs were thorough; however, during the inspection of the medical broadscope licensee, the inspector did not place the appropriate emphasis on potentially risk-significant areas, such as HDR brachytherapy and the use of unsealed iodine-131 for thyroid therapy. Instead, the inspector focused on areas that are considered to be of low safety significance, such as diagnostic nuclear medicine activities. Following the accompaniment, the review team member discussed this observation with the Section Chief, who along with the Unit Supervisor, made some changes to their inspection guidance and documentation to place greater emphasis on risk-significant activities. In light of the review team's findings during the on-site portion of the review, the review team determined that the underlying issue was not that the inspectors did not understand risk significance, but that they were not sufficiently inspecting areas they were unfamiliar with, such as therapeutic modalities and their related requirements in 10 CFR Part 35. The review team believes that by addressing the recommendation in Section 3.1 of this report the Section's technical staff will have sufficient knowledge and skills to perform adequate inspections of medical facilities.

The review team found that inspection reports and findings were generally appropriate and that prompt regulatory actions were taken, as necessary. The Section issues inspection letters to licensees conveying the results of all inspections. When a licensee is found to be in non-compliance, the Section issues a written notice of non-compliance. The notice requires the licensee to provide a written statement responding to the violations. The review team determined that the Section's inspection findings resulted in licensee corrective actions that were appropriate to address the underlying issues and sufficient to prevent recurrence. Depending on the severity of the violations issued, the Section can place licensees on "heightened oversight," which reduces the time interval between inspections. The Section has the authority to impose civil penalties or issue orders to suspend or cease operations, based on the severity or safety significance of the violations.

The review team found that supervisory accompaniments were conducted annually for all inspectors. The Unit Supervisor discusses performance observations with each inspector during the accompaniment and uses "inspection notes" to communicate general inspection guidance to the staff.

At the start of the on-site review, the review team noted that documents that contained information that the team considered sensitive or security-related information were not marked or identified as such. These documents, including inspection records related to licensee implementation of the Increased Controls, were being stored in a main file room. Although the file room had access controls, because files related to other programs, such as right-to know and asbestos, were also stored in the file room, many individuals other than the Section managers and staff could access the files. Although the review team did not identify any instances of improper release of information, the review team was concerned that without proper control of the files, the likelihood of release was much greater. The review team expressed these concerns to the Section Chief, who noted that any document that is required to be kept under State or Federal law is a public record and subject to the Kansas Open Records

Act (KORA). The Section Chief acknowledged that although the documents were subject to release under KORA, due to potential harm from inadvertent release or unauthorized disclosure, there was a need to better control the applicable files. As a result, the Section Chief developed a policy for license files related to the Increased Controls (or other files as designated by Section management). The policy was distributed to the Section staff immediately. Implementation of the policy resulted in the subject files being removed from the main file room and placed into a separate location where their access could be restricted to the Section managers and staff. The policy also prescribed, in part, that the outside of the files be conspicuously marked and that files not be left unattended.

The review team further inquired about outgoing correspondence from the Section, such as inspection reports or notices of violation that described licensee implementation of the Increased Controls. These outgoing documents were also not being marked or noted as containing sensitive or security-related information. This matter was discussed with the Section Chief, who modified the template for Increased Controls inspection reports to include the statement, "This letter and/or its attachments may contain sensitive information and should be reviewed against the licensee's policies on control of sensitive information." The review team recommends that the State further develop the policy that was instituted during the onsite review and provide additional guidance for identifying, marking, handling, transmitting, and storing documents containing sensitive information.

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

3.4 Technical Quality of Licensing Actions

The review team interviewed license reviewers, evaluated the licensing process, and examined licensing casework for 32 licensing actions. The casework was 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, security requirements, operating and emergency procedures, appropriateness of the license conditions, and overall technical quality. The casework was also reviewed for timeliness, use of appropriate correspondence, reference to appropriate regulations, supporting documentation, consideration of enforcement history, pre-licensing visits, peer or supervisory review, and proper signatures.

The licensing casework was selected to provide a representative sample of licensing actions completed during the review period. The sampling included the following types of use: medical broadscope, including one with gamma knife authorization; academic broadscope; academic research and development; industrial research and development laboratory; self-shielded irradiator; medical institution; medical private practice; nuclear pharmacy; cyclotron; industrial radiography; well logging and portable gauge. Types of licensing actions selected for evaluation included 7 new licenses, 10 renewals, 11 amendments to existing licenses and 4 license terminations. The casework sample represented work from each of the license reviewers. A listing of the licensing casework evaluated, with case-specific comments, can be found in Appendix D.

Overall, the review team found that the licensing actions were thorough, complete, consistent, and of high quality with health, safety, and security issues properly addressed. License tie-down conditions were stated clearly, backed by information contained in the file, and enforceable. Deficiency letters clearly stated regulatory positions, were used at the proper time, and identified substantive deficiencies in the licensees' documents. The Section uses templates to generate correspondence, as well as new and renewed licenses. The Section uses standard formats and license conditions for each license type and utilizes licensing guidance based on NRC licensing guidance or other guidance documents, as appropriate.

The Section's administrative staff receives all licensing actions and logs receipt of the action. The technical staff members then enters all pertinent information and/or changes into the Section's database, which tracks the status of all licensing actions. Technical staff completes licensing actions on a first-come, first-serve basis. One of the technical staff members has become so experienced and proficient with licensing to be considered the senior license reviewer. This senior license reviewer completes the majority of licensing actions. For staff members with less experience in a given area, the senior license reviewer or other experienced members of the technical staff will provide additional oversight or mentoring. The review team found that all completed licensing actions are reviewed by the Unit Supervisor and reviewed and signed by the Section Chief.

Since the last review period, the Section has phased out the process of renewing licenses on a 2-year frequency in favor of a 5-year frequency. The Section staggered the licenses' expiration dates to avoid numerous licenses coming due for renewal at the same time in the future.

The review team found that actions terminating licenses were well documented. The terminated license files included appropriate documentation and records. The Section conducted confirmatory surveys for license terminations when appropriate, and documented the results. The license files included documentation related to the proper disposal or transfer of licensed materials. The review team also evaluated license termination files related to a large decommissioning project involving an industrial research and development laboratory with widespread carbon-14 contamination. The review team determined that the Section provided thorough oversight and review of the project, ultimately resulting in the termination of the license and the release of the facility for unrestricted use.

During the review period, the Section implemented a policy for conducting pre-licensing reviews of all new applicants. The policy incorporated the essential elements of NRC's revised pre-licensing guidance to verify that the applicant would use requested radioactive materials as intended. The Section checked applicants that did not possess a radioactive materials license from NRC or another Agreement State against other types of licensure or registration, including various on-line search mechanisms and interagency communications, to verify the identity of individuals. If a pre-licensing visit was necessary, the license reviewer or other inspector performed the site visit.

The review team evaluated the Section's licensing practices regarding the Increased Controls and fingerprinting requirements. The review team confirmed that the licensing staff evaluated renewal applications and license amendments for applicability of the Increased Controls and fingerprinting requirements. There were no new Increased Controls licenses issued during the review period.

As noted in Section 3.3, at the beginning of the on-site review, the review team noted that documents containing information that the team considered sensitive or security-related information were not marked or identified as such, nor were they being adequately controlled from potential unauthorized access or disclosure. This included documents related to licenses, outgoing licensing actions, and incoming licensing action requests. Over the course of the on-site review, the Section made progress to correct the issue. The review team made a recommendation in this area in Section 3.3 of this report.

Based on the IMPEP evaluation criteria, the review team recommends that Kansas' 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 Section's actions in responding to incidents and allegations, the review team examined the Section's response to the questionnaire relative to this indicator, evaluated selected incidents reported for Kansas in the Nuclear Material Events Database (NMED) against those contained in the Section's files, and evaluated the casework for 18 radioactive materials incidents. A listing of the casework examined, with case-specific comments, can be found in Appendix E. The review team evaluated the Section's response to seven allegations, including one that NRC forwarded to the State during the review period.

The Section has implemented two procedures for incident and allegations activities. These two procedures are RCP-9, "Complaint Process," and RCP-11, "Investigation of Accidents, Incidents or Overexposures." The State has an after-hours hotline number for emergencies under the Department and the Kansas Division of Emergency Management. The afterhours support staff is knowledgeable about contacting the Section Chief to inform him of events that involve radioactive materials. Several of the incidents reviewed followed this particular reporting pathway, and the Section subsequently responded in a timely manner. When the Section receives a notification of an incident, the technical staff and managers discuss whether the incident warrants the need for an on-site investigation based on the safety significance of the incident or event. The Section uses the local NMED software to track and manage incidents and allegations. The Section uploads incident information to the national NMED electronically, based on the reportability thresholds established in the Office of Federal and State Materials and Environmental Management Programs (FSME) Procedure SA-300 "Reporting Material Events." The Section also notifies the NRC Headquarters Operations Center by telephone for the incidents that meet the reportability thresholds.

The incidents selected for review included lost, stolen, or abandoned radioactive material; damaged equipment; transportation; and equipment failures. The review team determined that the Section's responses to incidents were thorough, complete, and comprehensive, with the exception of the lost cesium-137 incident and associated potential medical event discussed in detail below. The Section physically responded to incidents that had safety significance, and the review team determined that the responses were prompt and well coordinated, with a level of effort that was commensurate with the health and safety or security significance. When no immediate threat was present and the Section determined that the licensee had qualified, competent individuals investigating the incident; the Section generally responded telephonically with subsequent review of the licensee's written report or an on-site follow-up at a later date.

The Section maintains investigation reports and supporting documentation in the local NMED software. Two levels of management reviewed the technical staff's final investigation reports. The review team noted that the staff's level of detail provided in investigation reports and the thoroughness in evaluating incidents increased over the review period. The review team attributed this increase to the training, qualification, and maturation of the new staff members as they gained regulatory experience with radioactive materials during the review period.

Of the 18 radioactive materials incidents reviewed, the review team identified two radioactive material incidents that met the criteria for reporting per FSME Procedure SA-300 that were not reported to the NRC Headquarters Operations Center nor submitted for inclusion in NMED. The Section subsequently reviewed the incidents, updated NMED, and contacted the NRC Headquarters Operations Center with the event information. One of the incidents involved a lost static eliminator containing polonium-210 in excess of 10 times the 10 CFR Part 20 Appendix C quantities. The second incident involved a lost cesium-137 source at a medical facility in excess of 10 times the 10 CFR Part 20 Appendix C quantities.

During the review team's casework evaluation under Technical Quality of Inspections (Section 3.3 of this report), the review team discovered that the cesium-137 source that had been lost at a medical facility had been documented by the technical staff during an inspection of the facility. In the particular case, a cesium-137 source used in a manual temporary brachytherapy procedure was lost and later found by the licensee in the medical facility's laundry room. The Section issued a notice of violation to the licensee for failure to report the lost source incident under State regulations; however, the Section did not capture the incident in the local NMED nor report the event to the NRC Headquarters Operations Center. During the on-site review, the review team requested that the Section report the event to the NRC Headquarters Operations Center and enter the event into NMED. The Section reported the event to the NRC Headquarters Operations Center on June 18, 2010. Following the on-site review, the review team evaluated the event report and found that the circumstances described in the event report provided additional information that was not documented in the inspection report or discussed during the on-site portion of the review. Specifically, the event report indicated that "It was determined that the source never reached its destination in the patient and most likely fell into the bed linens during insertion." The review team questioned whether the incident also constituted a medical event per 10 CFR 35.3045 either due to potential underdosing of the patient or due to dose to an unintended site, depending on where the source was located on the linens when not within the patient. The review team discussed this with the Section Chief. The Section Chief noted that the licensee did not identify any clinical complications with the patient and decided that the incident did not warrant further followup by the Section as a potential medical event due to the length of time that has passed since the event occurred.

As previously discussed in Sections 3.1 and 3.3 of this report, the review team identified a weakness in the area of performing inspections of medical licensees. The review team believes that the Section's review of the above incident is another example that illustrates the Section's technical staff's lack of understanding of and familiarity with 10 CFR Part 35 requirements. The review team also believes that it further demonstrates a need to enhance inspection skills in this area. The review team noted that the technical staff adequately pursued the issue regarding the lost source; however, the technical staff failed to recognize a potential medical event. The review team believes that by addressing the recommendation in Section 3.1 of this report the

Section's technical staff will have sufficient knowledge to identify and pursue potential medical events in the future.

The review team evaluated the one allegation that NRC forwarded to the Section and six allegations that the Section received directly during the review period. The review team concluded that the Section consistently took prompt and appropriate action in response to concerns raised. The review team noted that the Section thoroughly documented the investigations and retained all necessary documentation to appropriately close the allegations. The Section notified the concerned individuals of the conclusion of the investigation. The review team determined that the Section protected the identity of concerned individuals in accordance with the State of Kansas' open records request laws. Based on the Section's description of the process, it appears that the identities of concerned individuals would be protected with the exception of specific disclosure requirements as required by other regulations, hearings, or subpoenas.

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

4.0 NON-COMMON PERFORMANCE INDICATORS

Four non-common performance indicators are used to review Agreement State programs: (1) Compatibility Requirements, (2) Sealed Source and Device Evaluation Program, (3) Low-level Radioactive Waste Disposal Program, and (4) Uranium Recovery Program. NRC's Agreement with Kansas does not relinquish regulatory authority for a uranium recovery program; therefore, only the first three non-common performance indicators applied to this review.

4.1 Compatibility Requirements

To assess Kansas' status with respect to this performance indicator, the review team examined the Section's response to the questionnaire relative to this indicator; reviewed Kansas' State Regulation Status Data Sheet (SRS), as maintained by FSME; and conducted interviews with managers and staff responsible for this program area.

4.1.1 Legislation

Kansas became an Agreement State on January 1, 1965. Legislative authority to create an agency and enter into an Agreement with NRC is granted in Article 16 – Nuclear Energy Development and Radiation Control Act, Kansas Statutes, K.S.A. 48-1601 to 48-1625. The Department Secretary is responsible by law for radiation control under Statute 48-1606.

4.1.2 Program Elements Required for Compatibility

Kansas' regulations for the control of radiation are located in Department regulations K.A.R 28-35-133 through 28-35-505 for "Radiation" and apply to all ionizing radiation, whether emitted from radionuclides or produced by machines. Kansas' regulations are not subject to any sunset laws.

The review team verified that the State's rulemaking process offers the public and other interested parties an opportunity to comment on proposed regulation changes. Proposed rulemaking packages are initially reviewed by the Secretary of Administration and then by the Attorney General for legality. The Department then offers the public and other interested parties an opportunity to comment on the proposed regulation changes when it is published in the *Kansas Register*. The Department sends the proposed regulation changes to NRC for a compatibility review during the public comment period. The Joint Committee on Administrative Rules and Regulations is responsible for legislative oversight of regulations and also reviews the proposed regulatory package during the public comment period. Once the proposed regulation is adopted, it is then published in the *Kansas Register* and typically takes effect within 15 days. The review team determined that the process takes approximately 16-25 weeks, once it has gone through the Department's internal legal review. The Department has the ability to adopt certain rules by license condition, such as with the Increased Controls and fingerprinting requirements.

The review team noted that the Section revised its entire section of radiation regulations during the previous IMPEP review period. NRC issued a letter to the State on May 18, 2006, indicating that there were no compatibility comments on the 22 regulatory packages that were submitted. The review team also noted that the Section hired a Regulatory Affairs and Training Coordinator in 2006 to help ensure that the State's regulations remained compatible with NRC's regulations.

Current NRC policy requires that Agreement States adopt certain equivalent regulations or legally binding requirements no later than 3 years after the effective date of NRC's regulations. At the time of this review, the following amendment had not been reviewed for compatibility by NRC and was considered overdue:

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

The review team identified the following regulation amendments that the State will need to address in the future:

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

- "Requirements for Expanded Definition of Byproduct Material,"10 CFR Parts 20, 30, 31, 32, 33, 35, 61, 150 amendment (72 FR 55864), that is due for Agreement State adoption by November 30, 2010.

- "Exemptions from Licensing, General Licenses, and Distribution of Byproduct Material; Licensing and Reporting Requirements," 10 CFR Parts 30, 31, 32, 150 amendment (72 FR 58473), that is due for Agreement State adoption by December 17, 2010.

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

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

The review team found that the Section had prepared a regulatory package that included the single overdue regulation amendment (minor changes not resulting in a significant compatibility issue as a result of the delay in adoption) as well as the five regulatory amendments that are coming due for adoption. The Section submitted the regulatory to the Kansas Attorney General's office for legal review. On May 28, 2010, the Section received the Kansas Attorney General's legal review and began the process of publishing the proposed notice in the *Kansas Register* for public comment and simultaneously planned to submit the proposed regulations to the NRC for compatibility review. The Section indicated that, barring any major comments on the proposed regulations, the rulemaking package should be adopted and effective by October 2010.

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

4.2 Sealed Source and Device Evaluation Program

Although the Kansas Agreement State Program has authority to conduct sealed source and device (SS&D) evaluations for byproduct, source, and certain special nuclear materials; the Section did not conduct any SS&D evaluations during the review period. Accordingly, the review team did not review this indicator.

4.3 Low-level Radioactive Waste Disposal Program

In 1981, NRC amended its Policy Statement, "Criteria for Guidance of States and NRC in Discontinuance of NRC Authority and Assumption Thereof by states Through Agreement," to allow a State to seek an amendment for the regulation of low-level radioactive waste (LLRW) as a separate category. Those States with existing Agreements prior to 1981 were determined to have continued LLRW disposal authority without the need of an amendment. Although the Kansas Agreement State Program has authority to regulate a LLRW disposal facility, NRC has not required States to have a program for licensing a 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, it is expected to put in place a regulatory program that will meet the criteria for an adequate and compatibility LLRW program. There are no plans for a commercial LLRW disposal facility in Kansas. Accordingly, the review team did not review this indicator.

5.0 SUMMARY

As noted in Sections 3.0 and 4.0, the review team found Kansas' performance to be satisfactory for five of the six performance indicators reviewed and satisfactory, but needs improvement, for the performance indicator, Technical Quality of Inspections. The review team made two recommendations regarding program performance by the State. Overall, the review team recommends that the Kansas Agreement State Program be found adequate to protect public health and safety and compatible with NRC's program. Based on the results of the current

IMPEP review, the review team recommends that the next full IMPEP review take place in approximately 4 years.

Below are the recommendations, as mentioned earlier in the report, for evaluation and implementation, as appropriate, by the State:

1. The review team recommends that the State ensure that inspectors gain increased familiarity with the regulations in 10 CFR Part 35, as well as be provided appropriate formal training in addition to mentoring and/or on-the-job training to ensure familiarity with various therapeutic modalities involving byproduct materials such that these areas will be appropriately reviewed during inspections. (Section 3.1)

2. The review team recommends that the State further develop the policy that was instituted during the onsite review and provide additional guidance for identifying, marking, handling, transmitting, and storing documents containing sensitive information. (Section 3.3)

LIST OF APPENDIXES

APPENDIX A

IMPEP REVIEW TEAM MEMBERS

Name	**Area of Responsibility**
Janine F. Katanic, FSME	Team Leader Technical Staffing and Training
Shirley Xu, FSME	Status of Materials Inspection Program Technical Quality of Inspections
Charles W. Hamilton, Florida	Technical Quality of Licensing Actions
Rachel S. Browder, Region IV	Technical Quality of Incident and Allegation Activities Compatibility Requirements
Michelle Beardsley, FSME	Inspector Accompaniments

APPENDIX B

KANSAS ORGANIZATION CHARTS

ADAMS ACCESSION NO.: ML101880168

APPENDIX C

INSPECTION CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1
Licensee: University of Kansas Hospital Authority — License No.: 18-C800
Inspection Type: Routine, Announced — Priority: 3
Inspection Date: 9/10/07 — Inspectors: JW, JS, DW, JH

File No.: 2
Licensee: Via Christi Medical Center — License No.: 18-C753-01
Inspection Type: Routine, Announced — Priority: 1
Inspection Date: 4/19/10 — Inspector: JB

Comment:
The inspection did not cover relevant requirements related to 10 CFR Part 35 for various therapeutic modalities.

File No.: 3
Licensee: TEAM Industrial Svcs., Inc. — License No.: 21-B875
Inspection Type: Routine, Announced — Priority: 1
Inspection Date: 4/20/10 — Inspector: JW

File No.: 4
Licensee: University of Kansas Hospital Authority — License No.: 10-C787
Inspection Type: Routine, Announced — Priority: 1
Inspection Date: 4/21/10 — Inspector: JH

File No.: 5
Licensee: Chanute Manufacturing Company — License No.: 21-B189-01
Inspection Type: Routine, Unannounced — Priority: 1
Inspection Date: 4/6/09 — Inspector: JS

File No.: 6
Licensee: Acuren Inspection, Inc. — License No.: 21-B126-01
Inspection Type: Routine, Announced — Priority: 1
Inspection Date: 11/20/07 — Inspector: JJ

File No.: 7
Licensee: Coder X-Ray Service — License No.: 21-B165-01
Inspection Type: Routine, Announced — Priority: 1
Inspection Date: 8/4/09 — Inspectors: AS, JW

File No.: 8
Licensee: DBI, Inc. License No.: 21-B805
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 1/19/10 Inspector: JS

File No.: 9
Licensee: Sauder Custom Fabrication, Inc. License No.: 21-B149-01
Inspection Type: Routine, Unannounced Priority: 1
Inspection Date: 8/24/09 Inspector: JH

File No.: 10
Licensee: Taylor Forge Engineered License No.: 21-B108-01
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 6/25/06 Inspector: JS

File No.: 11
Licensee: Wolf Creek Nuclear Operating License No.: 21-B690-01
Inspection Type: Routine, Unannounced Priority: 1
Inspection Date: 6/18/09 Inspector: JH

File No.: 12
Licensee: Cardinal Health License No.: 20-B708-01
Inspection Type: Routine, Unannounced Priority: 2
Inspection Date: 9/10/08 Inspector: JJ

File No.: 13
Licensee: Hays Medical Center License No.: 19-B261-01
Inspection Type: Routine, Announced Priority: 2
Inspection Date: 2/18/09 Inspector: JB

File No.: 14
Licensee: Kansas City Cancer Center License No.: 19-C818
Inspection Type: Routine, Announced Priority: 2
Inspection Date: 2/5/09 Inspector: JB

Comment:

The inspection did not cover relevant requirements related to 10 CFR Part 35 for various therapeutic modalities.

File No.: 15
Licensee: Olathe Medical Center License No.: 19-B296-01
Inspection Type: Routine, Announced Priority: 2
Inspection Date: 4/30/09 Inspector: JB

File No.: 16
Licensee: Providence Medical Center License No.: 19-C182-01
Inspection Type: Routine, Announced Priority: 2
Inspection Date: 3/26/09 Inspector: JB

Comment:
The inspection did not cover relevant requirements related to 10 CFR Part 35 for various therapeutic modalities.

File No.: 17
Licensee: Salina Regional Health License No.: 19-B112-02
Inspection Type: Routine, Announced Priority: 2
Inspection Date: 2/26/10 Inspector: JB

File No.: 18
Licensee: St. Francis Health Center License No.: 19-B272-04
Inspection Type: Routine, Unannounced Priority: 2
Inspection Date: 4/8/10 Inspector: JW

File No.: 19
Licensee: University of Kansas Hospital License No.: 18-C801
Inspection Type: Routine, Unannounced Priority: 2
Inspection Date: 5/12/08 Inspectors: JB, JH, JJ

Comment:
The inspection did not cover relevant requirements related to 10 CFR Part 35 for various therapeutic modalities.

File No.: 20
Licensee: University of Kansas License No.: 38-C019-01
Inspection Type: Routine, Announced Priority: 3
Inspection Date: 4/24/07 Inspectors: JB, JS

File No.: 21
Licensee: Midwest Inspection Service License No.: OK-27005-01
Inspection Type: Reciprocity, Unannounced Priority: 1
Inspection Date: 2/18/10 Inspector: AS

File No.: 22
Licensee: Wesley Medical Center, LLC License No.: 19-C041-01
Inspection Type: Routine, Announced Priority: 2
Inspection Date: 2/14/07 Inspectors: JW, JH

Comments:
a) The Section dispatched the inspection report to the licensee approximately 75 days after the inspection.
b) The inspection did not cover relevant requirements related to 10 CFR Part 35 for various therapeutic modalities.
c) The Section used an incorrect citation to licensee in the notice of violation regarding a failure to report a lost source.
d) The inspectors did not identify a potential medical event.

File No.: 23
Licensee: Halliburton Energy Services, Inc. License No.: 27-C048-01
Inspection Type: Routine, Announced Priority: 3
Inspection Date: 9/19/07 Inspector: JJ

File No.: 24
Licensee: Kansas State University License No.: 38-C011-01
Inspection Type: Routine, Unannounced Priority: 3
Inspection Date: 3/10/10 Inspector: JS

File No.: 25
Licensee: Mt. Carmel Regional Medical Center License No.: 19-C243-01
Inspection Type: Routine, Announced Priority: 3
Inspection Date: 11/20/08 Inspector: JW

File No.: 26
Licensee: Pioneer Wireline Services License No.: 27-B565-01
Inspection Type: Routine, Unannounced Priority: 3
Inspection Date: 4/7/10 Inspector: JW

File No.: 27
Licensee: Platte Valley Medical Group, P.C. License No.: 12-B887
Inspection Type: Routine, Announced Priority: 3
Inspection Date: 4/28/09 Inspector: JB

File No.: 28
Licensee: Protechnics License No.: 27-B909
Inspection Type: Routine, Telephone Priority: 3
Inspection Date: 6/4/09 Inspector: JS

Comment:
The Section conducted a telephonic inspection because the licensee had not begun conducting licensed activities in Kansas.

File No.: 29
Licensee: Saint Luke's South Hospital License No.: 19-B775
Inspection Type: Routine, Unannounced Priority: 3
Inspection Date: 5/16/07 Inspector: JJ

File No.: 30
Licensee: St. Catherine Hospital License No.: 19-B300-03
Inspection Type: Routine, Announced Priority: 3
Inspection Date: 3/23/10 Inspector: JB

File No.: 31
Licensee: Kansas City Testing & Engineering License No.: 22-C250-01
Inspection Type: Routine, Announced Priority: 4
Inspection Date: 10/31/07 Inspector: JS

INSPECTOR ACCOMPANIMENTS

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

Accompaniment No.: 1
Licensee: Via Christi Medical Center License No.: 18-C753-01
Inspection Type: Routine, Announced Priority: 2
Inspection Date: 4/19/10 Inspector: JB

Comments:
a) The inspector did not review relevant requirements related to 10 CFR Part 35 for various therapeutic modalities, such as HDRs and unsealed iodine-131 therapy.
b) The inspector did not adequately review the relocation of a self-shielded irradiator, such as proper authorization for the relocation; radiation safety issues; potential industrial safety issues; and security-related issues.

Accompaniment No.: 2
Licensee: TEAM Industrial Svcs., Inc. License No.: 21-B875
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 4/20/10 Inspector: JW

Accompaniment No.: 3
Licensee: University of Kansas License No.: 10-C787
Inspection Type: Routine, Announced Priority: 3
Inspection Date: 4/21/10 Inspector: JH

APPENDIX D

LICENSE CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1
Licensee: Stevens County Hospital, Inc. License No.: 12-B923
Type of Action: New Amendment No.: 0
Date Issued: 2/12/08 License Reviewer: JW

File No.: 2
Licensee: Nuclear Enterprises, LLC License No.: 20-B892
Type of Action: New Amendment No.: 0
Date Issued: 9/29/06 License Reviewer: JH

File No.: 3
Licensee: SE Kansas Regional Planning Commission License No.: 22-B902
Type of Action: New Amendment No.: 0
Date Issued: 3/2/07 License Reviewer: JB

File No.: 4
Licensee: TL Enterprises, Inc. License No.: 22-B938
Type of Action: New Amendment No.: 0
Date Issued: 11/4/09 License Reviewer: JS

File No.: 5
Licensee: Line Medical, Inc. License No.: 19-B894
Type of Action: New Amendment No.: 0
Date Issued: 9/21/06 License Reviewer: JH

File No.: 6
Licensee: Sumner Regional Medical Center, Inc. License No.: 19-B942
Type of Action: New Amendment No.: 0
Date Issued: 10/7/09 License Reviewer: JW

File No.: 7
Licensee: Xenometrics, Inc. License No.: 26-B937
Type of Action: New Amendment No.: 0
Date Issued: 4/13/10 License Reviewer: JH

File No.: 8
Licensee: G.E. Engineering, P.A. License No.: 22-B762
Type of Action: Renewal Amendment No.: 5
Date Issued: 7/18/06 License Reviewer: JB

File No.: 9
Licensee: William Newton Memorial Hospital, Inc. License No.: 19-B298-01
Type of Action: Renewal Amendment No.: 35
Date Issued: 4/25/07 License Reviewer: JS

File No.: 10
Licensee: Kansas Department of Health and Environment License No.: 22-B707-01
Type of Action: Renewal Amendment No.: 10
Date Issued: 2/25/10 License Reviewer: AS

File No.: 11
Licensee: Cornish Wireline Services, Inc. License No.: 27-B128-01
Type of Action: Renewal Amendment No.: 40
Date Issued: 2/19/08 License Reviewer: JJ

File No.: 12
Licensee: American Red Cross License No.: 24-B638-01
Type of Action: Renewal Amendment No.: 10
Date Issued: 10/16/09 License Reviewer: JS

File No.: 13
Licensee: Superior Bowen Asphalt Company License No.: 22-B649-01
Type of Action: Renewal Amendment No.: 9
Date Issued: 9/13/06 License Reviewer: JJ

File No.: 14
Licensee: Atchison Steel Casting and Machining, Inc. License No.: 21-B092-01
Type of Action: Renewal Amendment No.: 43
Date Issued: 11/30/07 License Reviewer: JH

File No.: 15
Licensee: Century Instrument Corporation License No.: 25-R494-01
Type of Action: Renewal Amendment No.: 15
Date Issued: 12/11/08 License Reviewer: JS

File No.: 16
Licensee: Cypress Women's Imaging, Inc. License No.: 11-B853
Type of Action: Renewal Amendment No.: 4
Date Issued: 6/23/09 License Reviewer: JB

File No.: 17
Licensee: Via Christi Regional Medical Center, Inc. License No.: 18-C753-01
Type of Action: Renewal Amendment No.: 15
Date Issued: 6/12/09 License Reviewer: JH

Comment:
The Section authorized a higher than intended maximum possession limit for the HDR unit on the license. The Section issued an amendment with lower possession limits during the on-site review.

File No.: 18
Licensee: Siemens Medical Solutions, USA, Inc. License No.: 29-C135-01
Type of Action: Amendment Amendment No.: 28
Date Issued: 6/7/10 License Reviewer: JB

File No.: 19
Licensee: PETNET Solutions, Inc. License No.: 10-C814
Type of Action: Amendment Amendment No.: 16
Date Issued: 1/25/10 License Reviewer: JH

File No.: 20
Licensee: Mowery Clinic, LLC License No.: 19-B795
Type of Action: Amendment Amendment No.: N/A
Date Issued: 3/11/08 License Reviewer: JW

File No.: 21
Licensee: Halliburton Energy Services, Inc. License No.: 27-C048-01
Type of Action: Amendment Amendment No.: 47
Date Issued: 11/7/08 License Reviewer: JJ

File No.: 22
Licensee: University of Kansas License No.: 38-C019-01
Type of Action: Amendment Amendment No.: 63
Date Issued: 8/26/08 License Reviewer: JH

File No.: 23
Licensee: Acuren Inspection, Inc. License No.: 21-B126-01
Type of Action: Amendment Amendment No.: 40
Date Issued: 3/1/10 License Reviewer: JW

File No.: 24
Licensee: Wichita State University License No.: 31-C155-01
Type of Action: Amendment Amendment No.: 28
Date Issued: 9/16/09 License Reviewer: JB

File No.: 25
Licensee: Line Diagnostics, Inc. License No.: 19-B894
Type of Action: Amendment Amendment No.: 1
Date Issued: 9/10/07 License Reviewer: JH

File No.: 26
Licensee: Xenotech, LLC License No.: 16-B808
Type of Action: Amendment Amendment No.: 6
Date Issued: 10/9/09 License Reviewer: JB

File No.: 27
Licensee: Wesley Medical Center, LLC License No.: 19-C041-01
Type of Action: Amendment Amendment No.: 74
Date Issued: 7/14/08 License Reviewer: JH

Comment:
The Section authorized a higher than intended maximum possession limit for the HDR unit on the license. The Section issued an amendment with lower possession limits during the on-site review.

File No.: 28
Licensee: Team Industrial Services, Inc. License No.: 21-B875
Type of Action: Amendment Amendment No.: 3
Date Issued: 7/16/07 License Reviewer: JH

File No.: 29
Licensee: Midwest Division – ACH, LLC License No.: 19-B366-01
Type of Action: Termination Amendment No.: 28
Date Issued: 9/20/07 License Reviewer: JJ

File No.: 30
Licensee: New Eagle – Picher Pharma Services, Inc. License No.: 25-B561-01
Type of Action: Termination Amendment No.: 24
Date Issued: 5/10/10 License Reviewer: JH

File No.: 31
Licensee: Gressel Oil Field Services, Inc. License No.: 27-B781
Type of Action: Termination Amendment No.: 5
Date Issued: 4/30/09 License Reviewer: JB

File No.: 32
Licensee: Aptuit, Inc. License No.: 26-B904
Type of Action: Termination Amendment No.: 2
Date Issued: 5/10/10 License Reviewer: JH

APPENDIX E

INCIDENT CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1
Licensee: Boeing Commercial Airplane Group
Date of Incident: 12/1/06
Investigation Date: 12/21/06
License No.: 29-C064-01
NMED No.: 060727
Type of Incident: Lost/Stolen Material
Type of Investigation: Licensee Report

File No.: 2
Licensee: Acuren Inspection Inc.
Date of Incident: 9/4/06
Investigation Date: 9/7/06
License No.: 21-B126-01
NMED No.: N/A
Type of Incident: Attempted Theft
Type of Investigation: Law Enforcement Report

File No.: 3
Licensee: Honeywell
Date of Incident: 7/27/06
Investigation Date: 7/27/06
License No.: GL-506
NMED No.: 100318
Type of Incident: Lost/Stolen Material
Type of Investigation: Licensee Report

Comment:
The review team discovered this event had not been reported to NRC as required. The Section reported it to the NRC Headquarters Operations Center on June 18, 2010.

File No.: 4
Licensee: Geotechnology, Inc.
Date of Incident: 8/9/06
Investigation Date: 8/9/06
License No.: 22-B845-01
NMED No.: 080357
Type of Incident: Damaged Equipment
Type of Investigation: Site

File No.: 5
Licensee: Kantest Incorporated
Date of Incident: 8/14/06
Investigation Date: 8/14/06
License No.: 21-B702-01
NMED No.: 080354
Type of Incident: Lost/Abandoned Material
Type of Investigation: Site

File No.: 6
Licensee: Log-Tech, Inc.
Date of Incident: 6/13/06
Investigation Date: 7/23/06
License No.: 27-B565-01
NMED No.: 080353
Type of Incident: Lost/Abandoned Material
Type of Investigation: Licensee Report

File No.: 7
Licensee: Tetra Tech
Date of Incident: 8/14/07
Investigation Date: 10/31/07
License No.: 22-C250-01
NMED No.: N/A
Type of Incident: Damaged Equipment
Types of Investigation: Site, Licensee Report

File No.: 8
Licensee: Tulsa Gamma Ray
Date of Incident: 10/23/07
Investigation Date: 10/25/07
License No.: Reciprocity
NMED No.: 070665
Type of Incident: Equipment Failure
Type of Investigation: Licensee Report

File No.: 9
Licensee: Chanute Manufacturing
Date of Incident: 8/25/07
Investigation Date: 8/25/07
License No.: 21-B189-01
NMED No.: 070544
Type of Incident: Equipment Failure
Type of Investigation: Site, Licensee Report

File No.: 10
Licensee: ELI Wireline Service
Date of Incident: 3/5/07
Investigation Date: N/A
License No.: 29-C064-01
NMED No.: N/A
Type of Incident: Lost/Abandoned Material
Type of Investigation: None

File No.: 11
Licensee: Aptuit, Inc.
Date of Incident: 4/22/08
Investigation Date: 4/23/08
License No.: 26-B904
NMED No.: 080640
Type of Incident: Release of Material
Type of Investigation: Licensee Report

File No.: 12
Licensee: Aptuit, Inc.
Date of Incident: 8/20/08
Investigation Date: 8/27/08
License No.: 26-B904
NMED No.: 080652
Type of Incident: Release of Material
Type of Investigation: Licensee Report

File No.: 13
Licensee: IPS, Inc.
Date of Incident: 11/12/06
Investigation Dates: 7/18/08, 9/17/08, 11/4/08
License No.: 27-C057-01
NMED No.: 080448
Type of Incident: Lost/Abandoned Material
Type of Investigation: Licensee Report

File No.: 14
Licensee: Hawker Beechcraft
Date of Incident: 3/20/08
Investigation Date: 4/21/08
License No.: GL-185
NMED No.: 060701
Type of Incident: Lost/Abandoned Material
Type of Investigation: Licensee Report

File No.: 15
Licensee: Kleinfelder Central, Inc.
Date of Incident: 6/6/09
Investigation Date: 7/9/09
License No.: 22-B632-01
NMED No.: 090357
Type of Incident: Lost/Abandoned Material
Type of Investigation: Licensee Report

File No.: 16
Licensee: Integrated Nuclear Enterprises
Date of Incident: 2/11/09
Investigation Date: 2/11/09
License No.: 19-B272-01
NMED No.: 090356
Type of Incident: Transportation
Type of Investigation: Licensee Report

File No.: 17
Licensee: Hawker Beechcraft
Date of Incident: 1/29/09
Investigation Date: 2/3/09
License No.: GL-185
NMED No.: 090355
Type of Incident: Lost/Abandoned Material
Type of Investigation: Licensee Report

File No.: 18
Licensee: Wesley Medical Center
Date of Incident: 10/1/06
Investigation date: 2/14/07
License No.: 19-C041-01
NMED No.: 100315
Type of Incident: Lost/Stolen Material
Type of Investigation: Site

Comments:

a) The review team discovered the lost source event had not been reported to NRC as required. The Section reported it to the NRC Headquarters Operations Center on June 18, 2010.

b) The review team found that the event report provided additional information that suggested that a medical event per 10 CFR 35.3045 may have occurred due to the source not being inside of the patient, as intended. The Section did not identify this as a potential medical event and, therefore, did not review this aspect of the incident.