May 18, 2006

Ronald F. Hammerschmidt, Ph.D., Director
Division of Environment
Kansas Department of Health and Environment
1000 SW Jackson, Suite 400
Topeka, KS 66612-1367

Dear Dr. Hammerschmidt:

The 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 which documents the results of the Agreement State review held in Kansas on April 18-21, 2006. I was the team leader for the review. The review team's preliminary findings were discussed with you and your staff 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. The review team is also recommending that the period of heightened oversight of the Kansas program be discontinued.

NRC conducts periodic reviews of Agreement State programs to ensure that public health and safety are adequately protected from the 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 both Agreement State and NRC Regional Office radioactive materials programs. All reviews use common criteria in the assessment and place primary emphasis on performance. Three additional areas have been identified as non-common performance indicators and are also addressed in the assessment. The final determination of adequacy and compatibility of each Agreement State program, based on the review team's report, will be 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 draft team report for your review and comment prior to submitting the report to the MRB. Comments are requested within four 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. Our preliminary scheduling places the Kansas MRB meeting in the week of June 26, 2006. I will coordinate with you to establish the date for the MRB review of the Kansas report. NRC will provide invitational travel for you or your designee to attend the MRB meeting. 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.

Thank you for your cooperation, and if you have any questions regarding the enclosed report, please contact me at (630) 829-9661.

Sincerely,

/RA/

James L. Lynch
State Agreements Officer

Enclosure:
As stated

cc w/encl:
C. Duffy, KS
T. Conley, KS

Distribution
B. Parker, RI
V. Campbell, RIV
J. Tobin, STP
A. McCraw, STP
E. Fordham, Washington

DOCUMENT NAME:E:\Filenet\ML061390230.wpd
☐ Publicly Available ☐ Non-Publicly Available ☐ Sensitive ☐ Non-Sensitive
To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	RIII		RIII		RIII		RIII	
NAME	Lynch:jc							
DATE	05/18/06		/ /06					

OFFICIAL RECORD COPY

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF KANSAS AGREEMENT STATE PROGRAM

April 18-21, 2006

Draft Report

U.S. Nuclear Regulatory Commission

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 April 18-21, 2006, by a review team comprised of technical staff members from the Nuclear Regulatory Commission (NRC) and the State of Washington. Team members are identified in Appendix A. The review was conducted in accordance with the "Implementation of the Integrated Materials Performance Evaluation Program and Rescission of Final General Statement of Policy," published in the Federal Register on October 16, 1997, and the February 26, 2004, NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period of April 27, 2002, to April 21, 2006, were discussed with Kansas management on the last day of the review.

The Agreement State program is administered by the Radiation, Asbestos & Right-To-Know Section (the Section). The Section is part of the Bureau of Air and Radiation (the Bureau) in the Division of Environment (the Division). The Division is located within the Department of Health and Environment (the Department). Organization charts for the Division, Bureau and Section are included as Appendix B. At the time of the review, the Kansas program regulated approximately 306 specific licenses, including naturally occurring or accelerator-produced radioactive material (NARM). The review focused on the materials program as it is carried out under the Section 274b. (of the Atomic Energy Act of 1954, as amended) Agreement between the NRC and the State of Kansas.

In preparation for the review, a questionnaire addressing the common and non-common performance indicators was sent to the Section on February 2, 2006. The Section provided its response to the questionnaire on April 3, 2006. A copy of the questionnaire response may be found on the NRC's Agencywide Documents Access and Management System (ADAMS) using the Accession Number ML061020369.

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 licensing and inspection databases; (4) technical evaluation of licensing and inspection actions; (5) field accompaniments of three Kansas inspectors; and (6) interviews with staff and management to answer questions or clarify issues. The review team evaluated the information gathered against the IMPEP performance criteria for each common and applicable non-common indicator and made a preliminary assessment of the Agreement State program's performance.

Section 2 below discusses the State's actions in response to recommendations made following the previous IMPEP review. Results of the current review for the IMPEP common performance indicators are presented in Section 3. Section 4 discusses results of the applicable non-common performance indicators, and Section 5 summarizes the review team's findings and recommendations. The recommendations made by the review team 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 26, 2002, four recommendations were made and the results were transmitted to Clyde D. Graeber, Secretary of the Department, on December 13, 2002. In June 2005, the Management Review Board (MRB) concluded that the Kansas Agreement State Program should undergo a period of heightened oversight because of a programmatic weakness in adopting compatible regulations in the required timeframe. The MRB based its decision on the results of the 2002 IMPEP review, the November 2003 periodic meeting with the State, and the results of quarterly monitoring calls held between Kansas and NRC staff. The MRB concluded that heightened oversight would provide a process for NRC to monitor the State's completion of the adoption of final compatible regulations.

The review team's evaluation of the current status of the recommendations is as follows:

1. The team recommends the State ensure that the Agreement Materials Program has adequate resources and an adequate complement of qualified staff. (Section 3.3 of the 2002 report)

   Current Status: The State adopted a radiation control fee fund in 2004 which provides adequate resources to the Agreement State program. After suffering significant staff losses during the review period, the Section is now fully staffed, in part due to revenue from the fee fund. Although the newer staff members are well educated and capable to contribute to the Agreement State program, additional training and experience is necessary before the Section has an adequate complement of fully qualified staff. The review team recommends that this recommendation remain open, pending further staff training and experience.

2. The review team recommends that the Program review all Kansas' licenses to ascertain if they require financial assurance, and take appropriate action on each affected license to ensure that all licenses meet the State's financial assurance requirements. (Section 3.4 of the 2002 report)

   Current Status: The Section completed a review of all Kansas licenses with regard to the need for financial assurance and now appropriately requires certain licensees to maintain financial assurance for decommissioning. The Section should ensure that those licensees with financial assurance in place appropriately increased the amounts in accordance with the revised Kansas regulations that were implemented in December 2005, which included revised financial assurance amounts compatible with NRC regulations. This recommendation is closed.

3. The team recommends that, when the Bureau uses legally binding requirements as alternates to rules, it submit the text of the requirements to NRC for review. (Section 4.1.1 of the 2002 report)

   Current Status: The review team confirmed that current legally binding requirements, such as the increased controls license conditions, were submitted to NRC for approval, as required. Section management is aware that, in the future, if requirements are used in lieu of regulations, the text of those requirements needs to be reviewed by the NRC. This recommendation is closed.

4. The review team recommends the Bureau adopt the regulations "Timeliness in Decommissioning of Materials Facilities," and "Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use," or adopt generally applicable legally binding alternatives to the regulations. (Section 4.1.1 of the 2002 report)

   Current Status: The referenced regulations were adopted. This recommendation is closed.

3.0 COMMON PERFORMANCE INDICATORS

IMPEP identifies five common performance indicators to be used in reviewing both NRC Regional and Agreement State programs. These indicators include: (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 Division management and staff; and reviewed job descriptions, training plans, and training records. The review team also considered any possible workload backlogs in evaluating this indicator; however, no licensing or inspection casework backlogs were identified.

The Section Chief supervises three administrative staff and three unit supervisors. The Materials Supervisor is responsible for the radioactive materials program which employs five Environmental Scientists, who perform both licensing and inspection duties. The Section devotes approximately 4.7 full time equivalent (FTE) to the radioactive materials program, of which approximately 3.0 FTE are allotted for licensing and inspection. The remaining 1.7 FTE includes program management and administrative support. The FTE support for the radioactive materials program is expected to increase to approximately 6.5 FTE as the x-ray program staffing increases and the majority of x-ray duties that are now being performed by radioactive materials staff are transferred to the new x-ray staff members.

On January 1, 2006, the radiation control inspector classification was changed to Environmental Scientist. The reclassification resulted in a five percent raise for the staff, and gives employees better career progression potential. The reclassification also gives the Section a larger pool of applicants to fill vacancies.

The 2002 IMPEP review team noted that the program had only two staff members fully qualified to perform license reviews and inspections. The review team concluded that the lack of adequate staff was a root cause of weaknesses observed in the radioactive materials program. Since the last review, the program lost several staff members. Four radiation control inspectors left the program for other employment opportunities in December 2002, November 2003, January 2004, and November 2004. A temporary employee, involved primarily with a large decommissioning project, was not rehired after his contract was completed in June 2004.

By May 2005, all of the vacated positions, other than the temporary position, had been re-filled. In April 2006, the remaining vacant radioactive materials Environmental Scientist position was filled and a new support position, reporting to the Section Chief, was also hired. Responsibilities of the support position include maintaining regulations up-to-date, providing training for technical staff and providing outreach to Kansas licensees. At the time of the review, the Kansas Agreement State Program was fully staffed.

Two of the Environmental Scientists are fully qualified to perform both licensing and inspection activities. The other three Environmental Scientists have bachelor's degrees and have limited experience in the radioactive materials area. Those staff members have attended the two-week NRC-sponsored Basic Health Physics Course, as well as the NRC's Inspection Procedures Course and the NRC's Licensing Practices and Procedures Course. These three staff members also attended the Safety Aspects of Industrial Radiography course, the week after this IMPEP review. The Section Chief stated that additional training, such as medical and well logging courses, is being scheduled as work schedules, funding and training dates allow. In addition to the core technical training, two of the Environmental Scientists have attended the NRC Security training course. Two others are scheduled to attend the Security training courses scheduled for May and June 2006, respectively.

The Section has a documented qualification and training plan that is consistent with the guidance in the NRC/Organization of Agreement States Training Working Group Report and the NRC's Inspection Manual Chapter (MC) 1246. The Section also uses on-the-job and in-house training to supplement the course work so that individuals may broaden their work areas. Emphasis is placed on cross-training so that staff develop skills applicable to other areas, such as x-ray. Newer staff members are assigned increasingly complex licensing duties under the direction of the Materials Supervisor and accompany more experienced inspectors during increasingly complex inspections. Inspectors are assigned independent inspections after demonstrating competence during accompaniment evaluations by the Materials Supervisor.

The review team noted that the Section had stable funding during the review period. The Section collects 100 percent of the budget from materials fees, which goes into a dedicated fund. This radiation control fee fund became effective in October 2004 and allowed funding of training, additional staff and new equipment.

The State of Kansas does not have an oversight board or committee to provide direction to the Agreement State program.

During the last IMPEP review, the review team made the following recommendation: "The team recommends the State ensure that the Agreement Materials Program has adequate resources and an adequate complement of qualified staff." The Section has made significant progress since the last IMPEP review in providing resources through a dedicated fee fund and obtaining a fully staffed radioactive materials program. Due to staff retention issues, however, the program still has only two fully qualified staff members to perform licensing and inspection activities. As evidenced by inspector accompaniments performed as part of the review, Section staff are progressing in their development, but need additional training and experience. For that reason, the review team recommends that the recommendation mentioned above, remain open until additional staff members are fully qualified to perform licensing and inspection

activities.

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, but needs improvement.

3.2 Status of Materials Inspection Program

The team focused on five factors in reviewing this indicator: inspection frequency; overdue inspections of Priority 1, 2, and 3 licensees; initial inspection of new licenses; timely dispatch of inspection findings to licensees; and the performance of reciprocity inspections. The review team's evaluation is based on the Section's response to the questionnaire relative to this indicator, data gathered from the Section's licensing and inspection database, the examination of completed inspection casework, and interviews with managers and staff.

The review team's evaluation of the Section's inspection priorities verified that inspection frequencies for various types or groups of licenses are as at least as frequent than similar license types listed in MC 2800. During a 2005 self-assessment, Kansas staff discovered that four storage-only licensees were being inspected less frequently than MC 2800 requirements. Staff increased the inspection frequency and achieved compatibility in March 2005. The Section requires more frequent inspections for a number of license categories. Medical broad scope programs, gamma knives, and nuclear pharmacies are inspected annually whereas MC 2800 allows a two year periodicity. Academic broad scope programs and research & development licenses are inspected annually compared to the NRC's three-year frequency. Small private nuclear medicine licenses are inspected on a two-year frequency compared to the NRC's three-year frequency. Portable gauge licenses are inspected on a four-year frequency compared to the NRC's five-year frequency for this type of license.

The Section tracks all inspection activities in a computer database. The team observed that the database can easily be queried by program managers and staff members to determine inspection status for any licensed facility.

The Section Chief indicated that there was only one inspection, an academic broad scope program, currently overdue by more than 25 percent of the NRC's frequency. This licensee was cited for numerous compliance issues during the review period. Consultations with licensee staff and management are on-going to correct the issues. During the resolution period, a scheduled periodic inspection did not occur. Kansas staff considers re-inspection a priority and have scheduled it to be performed in May 2006. Of 61 initial inspections completed during the review period, only one was not conducted within one year of license issuance. It was completed 15 months after license issuance.

The timeliness of the issuance of inspection findings was determined by the review team's evaluation of inspection casework. Completed inspection reports are reviewed and signed by the Materials Supervisor. A majority of inspection letters regarding inspection results were sent within 30 days of the inspection date. With nearly 500 inspections conducted during this review period, only 26 letters were issued later than 30 days after the inspection. The longest overdue letter was 123 days after an April 2004 inspection during the 2004-2005 time-frame when program staffing was a primary concern.

Reciprocity was granted to 44 licensees in 2002, 30 licensees in 2003, 33 licensees in 2004, 26 licensees in 2005 and to 17 licensees thus far in 2006. The Section's reciprocity inspection goals are equivalent to the requirements in MC 1220 (20 percent for Priority 1, 2, and 3 licensees). The team found the Section inspected 12 percent of candidate reciprocity licensees during the review period, which is less than MC 1220 reciprocity inspection requirements. 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 MC 1220.

The review team examined the licensees that the Section had determined met the criteria for the increased controls, as per COMSECY-05-0028. The review team determined that the Section had correctly identified the Kansas licensees that require increased controls based on this criteria. The Section has prioritized its licensees and started to plan for the initial set of inspections of these licensees in accordance with the increased control requirements.

The team also reviewed the Section's work on general licensees. The Section currently has 91 registered general licensees. Each year, the Section requires a confirmatory inventory and a fee from registrants. General licensees are not normally inspected. Nationally, Kansas has joined the Organization of Agreement States in petitioning the NRC for rulemaking concerning general licenses (and specifically compatibility of regulations). Presently, compatibility with the NRC's general license rule (10 CFR 31.5) is held in abeyance pending Commission action on the petition. Additionally, the Section has a change to their general license regulations pending. The amendment is for certain detecting, measuring, gauging, or controlling devices and certain devices designed for producing light or an ionized atmosphere (contained in K.A.R. 28-35-178b) and will require further registration and timely response to written Section inquiries. When the amendment is codified, the Section has identified nine general licensees that under new regulations will be required to obtain a specific license due to exceeding threshold levels for cesium-137, strontium-90, cobalt-60, and americium-241 (or other transuranic elements).

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 the inspection reports and enforcement documentation and interviewed inspectors for 23 radioactive materials inspections conducted during the review period. The casework reviewed included work performed by eight of the Section's radioactive materials inspectors and covered a variety of license types including: academic broad scope, medical (broad scope, diagnostic and therapy), high dose-rate remote afterloader, mobile nuclear medicine, gamma stereotactic radiosurgery, industrial radiography, well logging, manufacturing and distribution, and portable gauge. Appendix C lists the inspection casework reviewed, with case-specific comments, as well as the results of the inspector accompaniments.

Based on the evaluation of the casework, the review team concluded that the routine inspections covered all aspects of the licensees' radiation programs. The review team found that inspection reports were generally very 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 documentation supported violations, recommendations made to the licensee, unresolved safety issues, and discussions held with the licensee during exit

interviews. Team inspections were frequently performed for larger and complex licensees and for training purposes. The review team noted in the review of the documentation and in discussions with staff, that although independent and/or confirmatory measurements are routinely conducted, documentation of these surveys often did not contain all the information needed to validate the surveys. The Materials Supervisor had previously identified this issue and was already working with staff to ensure proper survey documentation in inspection reports. During the review of the industrial radiography licenses, the review team noted that there was no documentation showing that inspectors had reviewed the radiographers' certification. Although not documented, the inspection staff stated that certification was confirmed as part of the inspection.

The inspection findings were appropriate and 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 in non-compliance, a written notice of non-compliance is normally issued. The notice requires the licensee to provide a written statement responding to the violations. Depending on the severity of the violations, the Section can place the licensee on "heightened oversight," which reduces the time between inspections. The Section can assess civil penalties and orders to suspend or cease operations, based on the severity or safety significance of the violations.

Supervisory accompaniments were conducted annually for all inspectors. The Materials Supervisor discusses observations with each inspector during the accompaniment and uses "inspection notes" to communicate general inspection guidance to the staff.

The Section has adequate numbers and types of radiation survey instruments to support their radiation protection efforts. Instruments are calibrated by the manufacturer or in-house by the Bureau. Appropriate, calibrated survey instruments such as Geiger-Mueller (GM) meters, scintillation detectors, ion chambers, micro-R-meters, and neutron meters were observed.

Three Section inspectors were accompanied during inspections by a review team member during the week of March 12, 2006. Inspection accompaniments included an industrial radiographer, a veterinary teletherapy licensee and a hospital. These accompaniments and associated reviewer comments are identified in Appendix C. During the accompaniments, each inspector demonstrated appropriate performance-based inspection techniques and knowledge of the regulations. The inspectors were generally trained, prepared, and thorough in their audits of the licensees radiation safety programs, however, room for improvement was noted as specified in the Appendix. The review team conveyed the need for additional staff training to Section management. Overall, each inspector utilized good health physics practices. Interviews with licensee personnel were performed in an effective manner, and the inspections were adequate to assess radiological health and safety at the licensed facilities. Inspectors also showed familiarity with the upcoming "increased controls" requirements.

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.

3.4 Technical Quality of Licensing Actions

The review team interviewed license reviewers, evaluated the licensing process, and examined licensing casework for 14 specific licenses. Thirty separate licensing actions were reviewed for completeness, consistency, proper radioisotopes and quantities, qualifications of authorized users, adequate facilities and equipment, adherence to good health physics practices, financial assurance, operating and emergency procedures, appropriateness of the license conditions, and overall technical quality. The casework was also reviewed for timeliness, use of appropriate deficiency letters and cover letters, reference to appropriate regulations, product certifications, supporting documentation, consideration of enforcement history, pre-licensing visits, supervisory review as indicated, and proper signatures. The files were checked for retention of necessary documents and supporting data.

The licensing casework was selected to provide a representative sample of licensing actions completed during the review period. The sampling included the following types: medical and academic broad scope, academic research and development, manufacturing and distribution, medical institution-limited, medical private practice, mobile nuclear medicine, nuclear pharmacy, industrial radiography, well logging, and fixed gauge. Types of licensing actions selected for evaluation included new licenses, renewals, amendments to existing licenses and license terminations. A listing of the licensing casework evaluated with case specific comments may be found in Appendix D.

Overall, the review team found that the licensing actions were thorough, complete, consistent, and of high quality with health and safety issues properly addressed. License tie-down conditions were stated clearly, backed by information contained in the file, and inspectable. Deficiency letters clearly stated regulatory positions, were used at the proper time, and identified substantive deficiencies in the licensees' documents.

The review team found that terminated licensing actions were also well documented. The license files included the appropriate material transfer records and survey records. Confirmatory surveys for license terminations were conducted when appropriate. The files showed that licensee documentation of proper disposal or transfer was provided. The review team also evaluated a large decommissioning project of a manufacturing facility with widespread thorium contamination. The review team determined that the Section provided excellent oversight and review of the project, ultimately releasing the site, within regulatory limits.

The review team examined the licensees that the Section had determined met the criteria for the increased controls, as per COMSECY-05-0028. The review team determined that the Section had correctly identified the Kansas licensees that require increased controls based on this criteria, and have procedures in place to issue increased controls to any additional licensees, as appropriate. Each licensee was issued a license amendment requiring increased controls in accordance with the timelines established by the Commission in the Staff Requirements Memorandum for COMSECY-05-0028.

In July 1998, the NRC revised its regulations to require all industrial radiographers to be certified by an approved certifying entity (10 CFR 34.43(a)(1)) and the effective date for Agreement States to adopt compatible regulations was July 9, 2001. This requirement, however, was not incorporated into the Kansas regulations until December 2005. In addition,

the Section did not have other legally binding requirements in place during the interim period to ensure that all radiographers listed on Kansas licenses and those filing reciprocity in the State were in fact certified. Radiographer certifications did appear to be reviewed as part of inspections, and thus the review team believes there was no indication of an immediate safety issue related to this matter. The review team recommends that the State evaluate all industrial radiography licenses and radiography reciprocity general licensees to ensure that all radiographers working in the State are appropriately certified by an approved certifying entity.

The administrative staff receives all licensing actions and enters all pertinent information into the Section's database. The status of all actions is tracked by the database. The senior license reviewer manages each action and completes them on a first-come, first-serve basis. Other license reviewers complete actions on an as-needed basis based on workload and experience for training purposes and/or to maintain familiarity with the licensing process. The senior license reviewer completes the majority of the actions. For license reviewers with less experience in a given area, the senior license reviewer provides additional oversight and/or assigns another experienced license reviewer as a mentor. All completed actions are reviewed and signed by the Section Chief. Cover letters and deficiency letters are reviewed and signed by the reviewers.

The Section uses templates to generate correspondence, as well as new and renewed licenses. Most amendments are made from the previous electronic version and then re-saved as the next amendment. The Section uses standard formats and license conditions for each license type and it utilizes licensing guides based on NRC licensing guides (NUREG-1556 series) as appropriate and maintains other licensing guidance (i.e., Technical Assistance Requests, regulatory guides) that are the same or similar to those used by the NRC.

Previously, the Section would renew licenses "as-is" every two years and require a "full" renewal every 10 years or every fifth amendment, whichever came first. During the review period, the Section began phasing out that process and converting licenses from the two year term to the more standard five year term. Full renewals will now be required every five years with only limited use of "as-is" renewals. Actual expiration dates are staggered to avoid numerous licenses coming due for renewal at the same time in the future.

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, 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 State database and incident files, and evaluated the casework and supporting documentation for nine radioactive materials incidents. A list of the incident casework examined, with case-specific comments, is included in Appendix E. The team also reviewed the Section's response to allegations involving radioactive materials, including allegations referred to the State by the NRC. Incident and allegation policies, file documentation, the Section's incident and allegation tracking system, NMED, and notification of incidents to the NRC Headquarters Operations Center were discussed with the Section Chief and staff.

When notified of an incident, the Section Chief or Materials Supervisor assigns a member of the inspection staff to investigate the incident and determine if the event requires a call to the NRC Headquarters Operations Center. The staff member is then responsible for recording the event in the Kansas incident database and the licensee file and leads any required follow-up activities. The Section responded to a total of 43 radioactive material incidents during the review period. Twelve of those incidents were reportable and were conveyed to the NRC Headquarters Operations Center and submitted to the NMED contractor. Monthly reports and follow-up information are submitted electronically by transmitting the contents of the Kansas database to the NMED system. One designated staff member manages the submissions to the NMED contractor. The review team evaluated nine of the incidents, which were required to be reported to the State. The incidents included: personnel overexposures, a stolen gauge, damage to equipment, and loss of radioactive material.

The review team noted that close coordination with the NRC was maintained, and the Section's response to incidents was commensurate with the health and safety significance of the event. Inspectors were dispatched for investigations when appropriate and enforcement action was taken when needed. Incident reports were thorough, well-documented and timely. All incident reports were reviewed and signed by the appropriate level of management.

During the review period, the Section received three allegations involving Agreement material. The team evaluated the casework for all three allegations, two of which were referred to the State by NRC. The review team's evaluation indicated that prompt and appropriate action was taken in response to the concerns raised. Allegers requesting anonymity were informed that every effort would be made to protect his/her identity, but could not be guaranteed. Each of the allegations reviewed were appropriately closed, and the allegers were informed of the results, when possible. There were no performance issues identified from the review of the allegation casework documentation.

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

IMPEP identifies four non-common performance indicators to be used in reviewing 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. Kansas' Agreement does not cover a uranium recovery program, so only the first three non-common performance indicators were applicable to this review.

4.1 Compatibility Requirements

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 the NRC is granted in Article 16 - Nuclear Energy Development and Radiation Control Act, Kansas Statutes, K.S.A. 48-1601 to 48-1619. The

Department Secretary is responsible by law for radiation control. The Division is designated as the State's radiation control agency. As discussed earlier in this report, a dedicated radiation control program fee fund became effective in October 2004.

4.1.2 Program Elements Required for Compatibility

The Kansas regulations governing radiation protection requirements are found in KAR 28-35-133 through KAR 28-35-363, and apply to all ionizing radiation, whether emitted from radionuclides or produced by machines. Kansas requires a license for the possession and use of all radioactive material, including naturally occurring materials and accelerator-produced radionuclides. Kansas also requires registration of all machines designed to produce x-rays or other ionizing radiation.

To the extent practical, the Kansas regulations follow the Suggested State Regulations of the Conference of Radiation Control Program Directors, Inc. Kansas has a 12-step regulation promulgation process which includes a 60-day notice for public comment prior to a public hearing. The entire process normally takes about 36 weeks from drafting to finalizing a regulation. The Section Chief currently has the responsibility for maintaining the regulations, however, a new support staff person was hired in April 2006, partially for the purpose of keeping the regulations adequate and compatible with NRC.

The review team evaluated the Section'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 Office of State and Tribal Program's State Regulation Status Data Sheet. Since the previous IMPEP review, the Section has addressed a large number of NRC regulation amendments by revising their regulations in their entirety. Section management chose to revise the regulations in whole rather than adopt individual NRC amendments partly because the required amendments entail conforming changes to a significant number of references. Section management also chose to address the x-ray program regulations first because those regulations were more out-of-date than the radioactive materials regulations.

The NRC transmitted ten comments concerning proposed changes to the Kansas regulations, in a letter dated September 22, 2005. The State intended to make appropriate corrections in the official copy of the regulations filed with the Kansas State legislature, which became effective on December 31, 2005. Due to a mistake in transmission, three of the ten NRC-recommended changes were not made to the legislature-endorsed copy. The State then submitted the regulations to the NRC as a final version in a letter dated March 21, 2006. NRC staff reviewed these regulations and noted that some of the previously identified comments had not been addressed in the final regulation package. On April 27, 2006, the Section Chief acknowledged the error and stated that a corrected regulation package would be promptly submitted into the Kansas rulemaking process.

Interviews conducted with the staff confirmed that the Section uses license conditions when regulations were not adopted within the 3-year time frame. The Section has the authority to issue legally binding requirements (e.g., license conditions) in lieu of regulations until compatible regulations become effective. The team noted that license conditions or other legally binding requirements were being used for the following rules:

- "Respiratory Protection and Controls to Restrict Internal Exposure," 10 CFR Part 20 amendment (64 FR 54543 and 64 FR 55524) that became effective February 2, 2003.

- "Increased Controls for Risk-Significant Radioactive Sources," NRC Order EA-05-090 (70 FR 72128) that became effective December 1, 2005.

The review team identified the following regulation amendment that will need to be addressed in the future. Section management indicated that the regulation is currently proposed and going through the rule promulgation process:

- "Security Requirements for Portable Gauges Containing Byproduct Material," 10 CFR Part 30 amendment (70 FR 2001) that became effective on July 11, 2005.

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 (SS&D) Evaluation Program

At the time of the review, Kansas had no sealed source or device manufacturers nor were any applicants anticipated in the near future. The State, however, does not wish to relinquish the authority to regulate SS&D manufacturers in the future. The State committed to have a program in place prior to performing evaluations. Accordingly, the review team did not evaluate this indicator.

4.3 Low-Level Radioactive Waste (LLRW) Disposal Program

In 1981, the 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 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 Kansas has such disposal authority, 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, 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 Kansas. Accordingly, the review team did not evaluate this indicator.

5.0 SUMMARY

As noted in Sections 3 and 4 above, the review team found Kansas' performance to be satisfactory but needs improvement for the performance indicator, Technical Staffing and Training, and satisfactory for all remaining performance indicators reviewed. The review team made two recommendations regarding the performance of the Kansas Agreement State Program and recommends that one recommendation from the last IMPEP review be left open, pending further staff training and experience. Accordingly, 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. The team also recommends that the period of heightened

oversight be discontinued. Based on the results of the current IMPEP review, the review team recommends that the next full IMPEP review take place in approximately four years.

Below is a summary list of recommendations, as mentioned in earlier sections of the report, for evaluation and implementation, as appropriate, by the State.

RECOMMENDATIONS:

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

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 MC 1220. (Section 3.2)

3. The review team recommends that the State evaluate all industrial radiography licenses and radiography reciprocity general licensees to ensure that all radiographers working in the State are appropriately certified by an approved certifying entity. (Section 3.4)

LIST OF APPENDICES

APPENDIX A

IMPEP REVIEW TEAM MEMBERS

Name	**Area of Responsibility**
James Lynch, RIII	Team Leader Technical Staffing and Training Inspector Accompaniments
Earl Fordham, Washington	Status of Materials Inspection Program
Vivian Campbell, RIV	Technical Quality of Inspections
Bryan Parker, RI	Technical Quality of Licensing Actions
Jennifer Tobin, STP	Technical Quality of Incident and Allegation Activities Compatibility Requirements

APPENDIX B

KANSAS ORGANIZATION CHARTS

ADAMS: ML061020369

APPENDIX C

INSPECTION CASEWORK REVIEWS

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

File No.: 1
Licensee: University of Kansas Hospital Authority — License No.: 18-C800
Inspection Type: Routine, Announced — Priority: 1
Inspection Date: 12/13/04 — Inspectors: JW, NA, JAJ, DW, JH

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 2
Licensee: University of Kansas Hospital Authority — License No.: 18-C800
Inspection Type: Routine, Announced — Priority: 1
Inspection Date: 9/24/03 — Inspectors: JAJ, JH, RT, DW

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 3
Licensee: Front Range Mobile Imaging — License No.: 12-B860
Inspection Type: Routine, Announced — Priority: 3
Inspection Date: 10/12/05 — Inspector: JB

File No.: 4
Licensee: Eli Wireline Services Inc. — License No.: 27-C096-01
Inspection Type: Routine, Announced — Priority: 2
Inspection Date: 11/19/04 — Inspector: NA

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 5
Licensee: Eli Wireline Services Inc. — License No.: 27-C096-01
Inspection Type: Routine, Announced — Priority: 2
Inspection Date: 10/3/02 — Inspector: JAJ

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 6
Licensee: Cornish Wireline Services Inc. License No.: 27-B128-01
Inspection Type: Routine, Unannounced Priority: 3
Inspection Date: 7/19/05 Inspector: JW

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 7
Licensee: Petro Wireline Service Inc. License No.: 27-B467-01
Inspection Type: Routine, Unannounced Priority: 3
Inspection Date: 7/27/05 Inspector: JTJ

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 8
Licensee: Petro Wireline Service Inc. License No.: 27-B467-01
Inspection Type: Routine, Announced Priority: 3
Inspection Date: 5/16/02 Inspector: JAJ

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 9
Licensee: Acuren License No.: 21-B126-01
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 7/15/05 Inspector: JB

Comments:
a. The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.
b. The report did not contain any documentation that the radiography certification was reviewed.

File No.: 10
Licensee: Acuren License No.: 21-B126-01
Inspection Type: Routine, Unannounced Priority: 1
Inspection Date: 5/28/04 Inspector: JAJ

Comments:
a. The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.
b. The report did not contain any documentation that the radiography certification was reviewed.

File No.: 11
Licensee: Wesley Medical Center LLC License No.: 19-C041-01
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 6/30/04 Inspectors: JAJ, NA

File No.: 12
Licensee: Beta Chem Laboratory License No.: 25-C686-01
Inspection Type: Investigation, Announced Priority: 1
Inspection Date: 9/20/05 Inspectors: JAJ, JB, DW

File No.: 13
Licensee: IRIS NDT License No.: 21-B866
Inspection Type: Termination Survey, Announced Priority: 1
Inspection Date: 3/16/06 Inspectors: JAJ

File No.: 14
Licensee: Mercy Hospital of Kansas, Inc. License No.: 19-C378-01
Inspection Type: Routine, Announced Priority: 3
Inspection Date: 11/16/04 Inspector: NA

Comments:
a. The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.
b. No record was found in the file that the licensee responded to the violation. However, the database indicated that a response was received.

File No.: 15
Licensee: Kruger Technologies Inc. License No.: 22-B659-01
Inspection Type: Routine, Unannounced Priority: 1
Inspection Date: 8/12/05 Inspectors: JW, JAJ

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 16
Licensee: Kansas State University License No.: 38-C011-01
Inspection Type: Routine, Announced Priority: 1
Inspection Dates: 6/24-26/03 Inspectors: RT, JH, JAJ, DW

File No.: 17
Licensee: Como Tech, Inc. License No.: 21-B629-01
Inspection Type: Routine, Announced field inspection Priority: 1
Inspection Date: 3/4/05 Inspector: JAJ

Comments:
a. The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.
b. The report did not contain any documentation that the radiographer certification was reviewed.

File No.: 18
Licensee: University of Kansas License No.: 38-C019-01
Inspection Type: Routine, Announced Priority: 1
Inspection Dates: 1/24-27/06 Inspectors: JB, DW, JAJ, JTJ, JW

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 19
Licensee: Mt. Carmel Medical Center License No.: 19-C243-01
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 7/19/04 Inspector: JAJ

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 20
Licensee: Morton County Health System License No.: 19-B831
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 10/27/04 Inspector: NA

Comment:
The report noted that confirmatory surveys were conducted, but the survey instrument used and calibration information was not identified.

File No.: 21
Licensee: Salina Regional Health Center License No.: 19-B112-02
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 11/22/04 Inspector: NA

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 22
Licensee: Log-Tech Inc. License No.: 27-B565-01
Inspection Type: Routine, Unannounced Priority: 3
Inspection Date: 5/13/04 Inspector: JAJ

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

File No.: 23
Licensee: Taylor Forge Engineered Systems, Inc. License No.: 21-B108-01
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 3/16/06 Inspector: JTJ

Comment:
The report did not contain any documentation that the radiographer certification was reviewed.

File No.: 24
Licensee: Saint John Hospital License No.: 19-B383-01
Inspection Type: Routine, Unannounced Priority: 3
Inspection Date: 11/22/04 Inspector: JW

Comment:
The calibration information and serial number for the survey instrument used to conduct confirmatory surveys was not recorded.

INSPECTOR ACCOMPANIMENTS

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

Accompaniment No.: 1
Licensee: Veterinary Specialty & Emergency Center License No: 19-B822
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 3/14/06 Inspector: JAJ

Comment:
The inspector missed an opportunity to test the teletherapy interlock and radiation alarm systems.

Accompaniment No.: 2
Licensee: Taylor Forge Engineered Systems, Inc. License No: 21-B108-01
Inspection Type: Routine, Announced Priority: 1
Inspection Date: 3/15/06 Inspector: JTJ

Comments:
a. The inspector missed opportunities to interview and observe less experienced radiographers.
b. Ancillary personnel working in the vicinity of the radiographic cell were not interviewed to confirm level of training.

Accompaniment No.: 3
Licensee: Lawrence Memorial Hospital
License No: 12-B161-01
Inspection Type: Routine, Announced
Priority: 3
Inspection Date: 3/16/06
Inspector: JW

Comment:

The inspector needs additional training with regard to evaluation of radiation therapy patient charts to determine licensee compliance with written directives.

APPENDIX D

LICENSE CASEWORK REVIEWS

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

File No.: 1
Licensee: St. Francis Health Center — License No.: 19-B272-04
Type of Action: Amendments — Amendment Nos.: 32, 31, 30, 29, 28
Date Issued: 4/17/06 (latest) — License Reviewer: JH

Comment:

License Condition 10 allows all authorized uses for all 11 locations listed, although many of those uses are not intended for many of those locations and should be clarified (i.e., brachytherapy use is not intended at a cardiology clinic).

File No.: 2
Licensee: Southwest Medical Center — License No.: 19-B002-02
Type of Action: Renewals — Amendment Nos.: 22, 21, 20, 19
Date Issued: 8/17/04 (latest) — License Reviewers: NA, JH, TC, VC

File No.: 3
Licensee: COMO Tech, Inc. — License No.: 21-B629-01
Type of Action: Amendment, Renewals — Amendment Nos.: 14, 13, 12
Date Issued: 9/30/05 (latest) — License Reviewers: TC, JH, RT

File No.: 4
Licensee: ELI Wireline — License No.: 27-C096-01
Type of Action: Amendments — Amendment Nos.: 39, 38, 37
Date Issued: 9/30/05 (latest) — License Reviewers: TC, JH

File No.: 5
Licensee: Precision Energy Services — License No.: 27-B633-01
Type of Action: Amendment, Renewal — Amendment Nos.: 14, 13
Date Issued: 5/9/05 (latest) — License Reviewer: JH

File No.: 6
Licensee: University of Kansas — License No.: 38-C019-01
Type of Action: Renewal — Amendment No.: 61
Date Issued: 3/8/06 — License Reviewer: JH

File No.: 7
Licensee: Cardinal Health — License No.: 20-B708-01
Type of Action: Amendments — Amendment Nos.: 15, 14, 13
Date Issued: 4/17/06 (latest) — License Reviewer: JH

File No.: 8
Licensee: Front Range Mobile Imaging — License No.: 12-B860
Type of Action: New, Amendment — Amendment Nos.: 00, 01
Date Issued: 5/9/05 (latest) — License Reviewer: JH

File No.: 9
Licensee: St. John Hospital — License No.: 19-B383
Type of Action: Renewal — Amendment No.: 27
Date Issued: 9/3/05 — License Reviewer: JH

File No.: 10
Licensee: Washburn University — License No.: 31-B303-01
Type of Action: Termination — Amendment No.: 19
Date Issued: 12/15/05 — License Reviewer: JAJ

File No.: 11
Licensee: Monarch Cement Co. — License No.: 22-B122-01
Type of Action: Termination — Amendment No.: 27
Date Issued: 12/29/05 — License Reviewer: JAJ

File No.: 12
Licensee: Kramer & Crouse Cardiology — License No.: 12-B838
Type of Action: Amendment — Amendment No.: 04
Date Issued: 11/23/05 — License Reviewer: JB

File No.: 13
Licensee: Team Cooperheat - MQS, Inc. — License No.: 21-B875
Type of Actions: New — Amendment No.: 00
Dates Issued: 8/8/05 — License Reviewer: JW

File No.: 14
Licensee: Meade District Hospital — License No.: 12-B854
Type of Action: New, Amendment — Amendment Nos.: 00, 01
Date Issued: 4/18/06 (latest) — License Reviewers: JW, JH

APPENDIX E

INCIDENT CASEWORK REVIEWS

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

File No.: 1
Licensee: Agricultural Engineering Associates — License No.: 22-B484-01
Date of Incident: 1/12/04 — NMED No.: 040322
Investigation Date: 1/12/04 — Type of Incident: Damaged Gauge
Type of Investigation: Inspection

File No.: 2
Licensee: Chemsyn Science Laboratories — License No.: 25-B561-01
Date of Incident: 10/23/03 — NMED No.: 030919
Investigation Date: 11/21/03 — Type of Incident: Overexposure
Type of Investigation: Inspection

File No.: 3
Licensee: Taylor Forge Engineering — License No.: 21-B108-01
Date of Incident: 1/23/04 — NMED No.: 040069
Investigation Date: 1/23/04 — Type of Incident: Overexposure
Type of Investigation: Inspection

Comment:
The close-out letter was not filed in the incident file.

File No.: 4
Licensee: McAfee, Henderson & Strick, Inc. — License No.: 22-B834
Date of Incident: 2/19/06 — NMED No.: 060133
Investigation Date: 2/20/06 — Type of Incident: Portable Gauge Theft
Type of Investigation: Inspection

File No.: 5
Licensee: Shilling Construction — License No.: 22-B741-01
Date of Incident: 7/12/05 — NMED No.: 060246
Investigation Date: 7/12/05 — Type of Incident: Damaged Gauge
Type of Investigation: Inspection

Comment:
Reported late to NMED on 4/3/06.

File No.: 6
Licensee: Log-Tech Inc. — License No.: 27-B565-01
Date of Incident: 3/1/06 — NMED No.: 060248
Investigation Date: 3/28/06 — Type of Incident: Lost Source
Type of Investigation: Inspection

File No.: 7
Licensee: The Rosel Company
License No.: 27-C057-01
Date of Incident: 6/2/05
NMED No.: 060247
Investigation Date: 6/3/05
Type of Incident: Lost Source
Type of Investigation: Inspection

Comment:
Reported late to NMED on 4/3/06.

File No.: 8
Licensee: Kansas Department of Transportation
License No.: 22-B315-01
Date of Incident: 8/5/05
NMED No.: 050520
Investigation Date: 8/5/05
Type of Incident: Damaged Gauge
Type of Investigation: Inspection

File No.: 9
Licensee: Dressler Consulting Engineering
License No.: 22-B837
Date of Incident: 4/3/04
NMED No.: 040234
Investigation Date: 4/16/04
Type of Incident: Damaged Gauge
Type of Investigation: Inspection