

July 10, 2002

MEMORANDUM TO: Luis A. Reyes, Regional Administrator
Region II

FROM: Carl J. Paperiello */RA/*
Deputy Executive Director for
Materials, Research and State Programs

SUBJECT: INTEGRATED MATERIALS PERFORMANCE EVALUATION
PROGRAM FOR REGION II

On June 5, 2002, the Management Review Board (MRB) met to consider the proposed final Integrated Materials Performance Evaluation Program (IMPEP) report for Region II (RII). The MRB found the RII program adequate to protect public health and safety.

Based on the results of the current IMPEP review, the next full review will be in approximately four years.

I appreciate the courtesy and cooperation extended to the IMPEP team during the review and your support of the program.

Attachment: Final IMPEP Report

cc: B. Mallett, RII
D. Collins, RII

CONTACT: Charles Cox, NMSS/IMNS
(301) 415 -6755

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF NRC REGION II PROGRAM

March 18-22, 2002

FINAL REPORT

U.S. Nuclear Regulatory Commission

Attachment 1

1.0 INTRODUCTION

This report presents the results of the review of the Region II (RII) nuclear materials program. The review was conducted during the period of March 18-22, 2002, by a review team comprised of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the State of Arkansas. 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 a Final General Statement of Policy," published in the Federal Register on October 16, 1997, and the November 5, 1999, revision to NRC Management Directive (MD) 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period February 1998 to March 2002, were discussed with RII management on March 22, 2002.

A draft of this report was issued to RII for factual comment on April 18, 2002. RII responded in a memorandum dated May 20, 2002. The Management Review Board (MRB) met on June 5, 2002, to consider the proposed final report. The MRB found the RII radiation control program was adequate to protect public health and safety.

The RII nuclear materials program is administered by the Director, Division of Nuclear Materials Safety (DNMS), who reports directly to the Regional Administrator. The DNMS organization chart is included as Appendix B. At the time of the review, the RII nuclear materials program regulated more than 800 specific material licenses.

In preparation for the review, a questionnaire addressing the common and non-common indicators was sent to RII on January 17, 2002. RII provided a response to the questionnaire on February 28, 2002. A copy of the completed questionnaire response can be found on NRC's Agency-wide Document Access and Management System (ADAMS) using Accession Number ML02101006.

The review team's general approach for conduct of this review consisted of: (1) examination of RII's response to the questionnaire; (2) analysis of quantitative information from the licensing, inspection, resource utilization, and allegation databases; (3) technical review of selected licensing, inspection, incident response, allegation, and decommissioning actions or files; (4) field accompaniments of two RII inspectors; and (5) interviews with staff and management to answer questions or clarify issues. The team evaluated the information that it gathered against the IMPEP performance criteria for each common and non-common indicator and made a preliminary assessment of RII's performance.

Section 2 below discusses RII's actions in response to recommendations made following the previous 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 indicators, and Section 5 summarizes the review team's findings and recommendations. Recommendations

made by the review team are comments that relate directly to program performance by RII. A response is requested from RII to all recommendations in the final report.

2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

During the previous routine IMPEP review, which concluded on February 13, 1998, four recommendations were made (some directed to RII: others to NRC Headquarters) and the results transmitted to Luis A. Reyes, Regional Administrator, RII in the final IMPEP report on May 7, 1998. The team's review of the current status of these recommendations is as follows:

- (1) RII should assure its inspectors make use of survey instruments calibrated at proper frequencies.

Current Status: In response to this recommendation, RII reminded staff of the requirement to use calibrated survey instruments and developed a calibration and inventory program. A notice was posted in the instrument storage area to remind inspectors to check the calibration of their instrument to ensure it remains in calibration during the inspection. No further cases of inspectors using survey instruments that were out of calibration were found by reviewers during the IMPEP review of inspection files and inspection accompaniments. This recommendation is closed.

- (2) RII should develop and implement an effective periodic, in-depth peer review type of quality assurance program for licensing actions.

Current Status: In response to this recommendation, RII established a periodic peer review through a Regional Office Instruction (ROI) in 1998. The peer review is a semi-annual review of completed licensing actions by license reviewers and DNMS managers. These reviews are intended to be a quality check to determine the appropriateness of license conditions and documents references, identify any grammatical or clerical errors, deficiencies in the license application, and completeness of licensing files. In addition, RII now requires licensing actions to undergo an independent review by a senior license reviewer prior to issuance of the license action. The 2000 IMPEP self assessment identified further inconsistencies and errors. However, the periodic peer review reduced the magnitude of the problem and the additional senior license reviewer check prior to issuing the action is an aggressive corrective action and recognized as a good practice during this IMPEP review. This recommendation is closed.

- (3) RII should ensure that the fuel cycle inspection program is not adversely affected when the current Inspection Follow-up System (IFS) program for tracking inspections results is terminated.

Current Status: RII is using the Plant Issues Matrix System (PIMS) to effectively track inspection findings, and the inspection program has not been adversely affected. This recommendation is closed.

- (4) Office of Analysis and Operational Data provide supplementary training to Office of Nuclear Material Safety and Safeguards (NMSS), Office of State Programs, the regions, and Agreement States, to make the Nuclear Material Event Database (NMED) system more accessible and usable for NRC and Agreement State staff.

Current Status: Significant improvements were made in the NMED system which is web based and the regions have been trained on the system. Review of inspection records, observations during the inspector accompaniments, and interviews with inspectors indicate that the NMED system is being used by the inspection staff. 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 are: (1) Status of Materials Inspection Program; (2) Technical Quality of Inspections; (3) Technical Staffing and Training; (4) Technical Quality of Licensing Actions; and (5) Response to Incidents and Allegations.

3.1 Status of Materials Inspection Program

The team focused on four factors in reviewing this indicator: inspection frequency, overdue inspections, initial inspection of new licenses, and timely dispatch of inspection findings to licensees. The review team's evaluation is based on the RII questionnaire responses relative to this indicator, data gathered independently from NRC's Licensing Tracking System (LTS) and other NMSS and RII statistical databases, the examination of completed licensing and inspection casework, and interviews with RII managers and staff.

Review of RII's inspection priorities shows that, as with the 1998 review, the RII inspection frequencies for various types or groups of licenses are consistent with program office guidance, as provided in Inspection Manual Chapter (IMC) 2800. This was verified by cross-checking the actual inspection frequencies entered in the LTS with the IMC 2800 frequencies. In all cases reviewed, the inspection frequencies in the database match the IMC 2800 frequencies. RII is also actively implementing a provision in IMC 2800 to reduce or extend individual licensee inspection schedules, based on the licensee's inspection findings and previous performance.

At the time of this IMPEP review, RII had no core inspections overdue, in comparison with the IMC 2800 guidance. The team noted that during the 1998 IMPEP review, RII had no core inspections overdue. Review of monthly NMSS statistical reports rarely showed any RII core inspections overdue over the past four years.

While onsite, the team obtained a listing of all new licenses issued by RII during the review period. The review team checked inspection dates for a sample of 16 of 165 new licenses issued from February 1998 through February 2002. Of the 16 sampled, two were not inspected within the first six months following licensees beginning licensed activity or having received licensed material. However, both were inspected within eight months of beginning licensed activities and within a

year of license issuance. The remaining 14 licensees were inspected within the appropriate six month or one year requirement as specified in IMC 2800.

Review of RII's reciprocity records indicate that RII failed to meet the previous criteria of 30 percent for Priority 3 inspections in 2000 (2 fewer than required) and 50 percent for Priority 1 inspections in 1998 (2 fewer than required). However, RII met the new criteria last year.

The team also evaluated the timeliness of RII's issuance of inspection findings. Based on data from RII's tracking system, 96 percent of the routine inspection findings are issued to licensees within 30 days. For all inspection findings, the average time to issue inspection findings during the review period was 21 days from completion of the inspections. The review team reviewed casework for 24 different inspection reports for the review period, and found that 22 had inspection findings transmitted to the licensee within 30 days. The remaining two were issued between 34 and 63 days. The review team determined that RII continues to perform appropriately with respect to the timeliness of inspection report issuance to licensees.

The team reviewed an LTS generated data set comparing the number of licensees in each State with the number of inspections conducted by RII since the last IMPEP review. There was no geographic bias on the part of RII in scheduling inspections, as required by IMC 2800.

During the review, the team discussed with RII the requirement in IMC 2800 to inspect at least 50 percent of the permanent field offices specified on a license over the course of the licensee's inspection cycle. The team determined that RII was aware of the requirement and had a system in place to identify the need for field office inspections. The review team verified that at least 50 percent of permanent field offices were being inspected for the inspection records reviewed.

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

3.2 Technical Quality of Inspections

The team evaluated the inspection reports, enforcement documentation, and inspection field notes and interviewed inspectors for 24 materials inspections conducted during the review period. The casework included 14 of RII's materials license inspectors, and covered inspections of various license types, including: source material medical institution, academic broadscope, medical private practice, nuclear medicine, fixed gauges, radiography, well logging, medical institution broad, research and development broad, and irradiator licensees. Appendix C lists the inspection casework files reviewed for completeness and adequacy with specific comments.

Based on the casework, the team noted that routine inspections are covering all aspects of the licensees' radiation programs. The review team found that inspection reports were thorough, complete, consistent, and of high quality, with sufficient documentation to ensure that 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 performed when appropriate and for training purposes.

During the onsite review, the team determined that RII is performing inspections of materials licensees in accordance with IMC 2800. Inspectors used the appropriate inspection field note forms on all the files reviewed, with a single, non-consequential, exception. The review team observed that inspectors were reviewing previous open items and past violations during the inspections. For the cases reviewed, the correct inspection documentation was used. Specifically, NRC Form 591s were used unless the findings warranted a written letter or escalated enforcement actions were involved.

During this review period, the team determined that DNMS Branch Chiefs are accompanying all inspectors at least once each year. Inspectors receive verbal feedback at the time of the inspection accompaniments, and a portion of the inspectors' annual performance appraisals address their inspection skills.

The team found that RII maintains a sufficient number of various models of survey instruments to perform radiological surveys of materials licensees. The review team examined RII's instrumentation and observed that the survey instruments in RII's office at the time of the onsite review were calibrated and operable. RII contracts with a commercial radiological service company to provide calibrations, and staggers the calibration dates. The calibration frequency for all instruments is one year which is consistent with the current NMSS policy.

Two RII inspectors were accompanied during inspections by a review team member during the periods of February 19 -21, 2002, and February 25-27, 2002. Inspection accompaniments were conducted as follows: a mobile nuclear medicine license, a fixed gauge user, a university with a special nuclear material license, and a medical broadscope license who was also authorized to conduct intervascular brachytherapy. These accompaniments are identified in Appendix C. All inspectors performed in-depth examinations of the licensees' facilities; interacted with licensee personnel; observed licensees' activities; and reviewed pertinent records. In all cases, the inspectors demonstrated a performance based inspection approach with appropriate technical skills and professional inspection techniques. The inspectors' performance were adequate to assess the radiological health and safety of the licensees' programs.

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

3.3 Technical Staffing and Training

Issues central to the evaluation of this indicator include the radioactive materials program staffing level, technical qualifications of the staff, training, and staff turnover. To evaluate these issues, the review team examined RII's questionnaire responses relative to this indicator, interviewed DNMS management and staff, interviewed members of the RII Division of Resource Management, and considered any possible workload backlogs.

RII's DNMS staffing has fluctuated during the review period. As RII noted in its response to the questionnaire, ten new technical staff members have been hired into DNMS since the last IMPEP review. Two individuals were qualified Reactor Resident Inspectors and one individual had partial Licensing Reviewer Authority from Region I. Four of the new staff participate in the Nuclear Safety Intern Program. During the review period, ten DNMS staff members left the program.

Three staff retired, one staff expired, two staff transferred within the Commission, one staff left the Commission for a utility, and three fuel facility staff moved to the Department of Energy. DNMS had two Health Physicists, one Fuel Facility Inspector, and one Fuel Facility Branch Chief vacancies at the time of the onsite review. Entry-level staff are recruited through the Nuclear Safety Intern Program. The Health Physicists positions were announced in July 2001 and have been subsequently posted in two additional employment announcements. The Fuel Facility Inspector position was announced June 2001 and has been subsequently posted in two additional employment announcements. DNMS continues to interview qualified entry-level applicants in anticipation of staffing needs through the Nuclear Safety Intern Program.

DNMS includes two Material Licensing/Inspection Branches (MLIB), 1 & MLIB 2, and the Fuel Facilities Branch. The Branches are currently staffed with 21 direct full time equivalents (FTEs), supported by 3.5 clerical FTEs, and led by three Branch Chiefs. Including non-technical overhead positions, DNMS has 33 staff members on-board at the time of the review. Funding for direct technical positions comes from NMSS, the Office of State and Tribal Programs, and the Office of Human Resources.

The review team found a good balance of personnel between licensing and inspection. With RII's organization, most technical staff in MLIB 1 and MLIB 2 complete both licensing and inspection actions, rather than having separate license reviewers and inspectors. The MLIBs hired four new technical staff since the last IMPEP review and five staff left the program. With just one exception, all the technical staff in RII were fully qualified or interim qualified inspectors at the time of the onsite review. The staff member not yet qualified, recently joined RII in July 2001, and has prepared a schedule outlining progress toward earning his qualifications. Of the 11 technical staff members who work on materials issues, six have full signature authority for licensing actions and one has limited signature authority. The remaining four have no signature authority for licensing actions, so any licensing work they perform is reviewed and signed by a supervisor or qualified reviewer. DNMS management tracks the qualifications of their staff in the DNMS Training Matrix. The Training Matrix tracks all the courses taken, courses needed, and dates that certain courses are needed for the Division staff. The Matrix is a spreadsheet version of the qualifications journals. The review team determined that the number of license reviewers with full or limited signature authority is sufficient to complete RII's materials licensing work, and allows for readjustments in the workload between materials licensing and inspection, as necessary.

The review team examined the training spreadsheet, spot-checked individual inspector's qualifications, interviewed human resource staff, reviewed staff training records, and interviewed managers concerning technical training in accordance with IMC 1246 requirements. The technical expertise of the RII staff continues to be a strength of the program.

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

3.4 Technical Quality of Licensing Actions

The team examined completed licensing casework and interviewed the staff for 32 specific licenses involving 40 licensing actions. Licensing actions were evaluated for completeness, consistency, proper isotopes and quantities used, qualifications of authorized users, adequate

facilities and equipment, and operating and emergency procedures sufficient to establish the basis for licensing actions. Licenses were evaluated for overall technical quality including accuracy, appropriateness, license conditions and tie-down conditions. Casework was evaluated for timeliness, adherence to good health physics practices, reference to appropriate regulations, documentation of safety evaluation reports, product certifications, or other supporting documents, consideration of enforcement history on renewals, pre-licensing visits, peer or supervisory review as indicated, and proper signature authorities. 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 which were completed during the review period. The sampling included the following types: broad academic; broad medical; fixed and portable gauges; general license manufacturing and distribution; industrial radiography; irradiator; master materials license, medical; nuclear pharmacy; research and development; service providers; and teletherapy. Types of licensing actions selected for evaluation included seven new licenses, ten renewals, eighteen amendments, and five terminations. A list of the licenses evaluated with case-specific comments can be found in Appendix D.

As discussed in Section 2.0, RII initiated a periodic peer review of completed licensing actions and a quality control review by a senior reviewer using a checklist prior to issuing the license action. Overall, the team found the licensing actions were thorough, complete, consistent, of good quality, and properly addressed health and safety issues. The files generally contained appropriate deficiency letters, and documentation of telephone communications with the licensee. The license reviewers generally signed all new or renewed licenses or amendments. For those licensing actions for which the license reviewer did not have signature authority, the licenses were signed by a senior reviewer with full authority, or by the Branch Chief. Licensing files were found to be adequately maintained.

The review team recommends the RII's management approach of identification of an issue, establishment of the expectations to address the issue and the successful resolution of issue by management be identified as a good practice. This approach was used to resolve licensing inconsistencies identified during IMPEP self assessments. RII management initiated a process which used a senior license reviewer to do a quality control review on all licensing actions prior to issuing the action. As one of the empowerment initiatives being pursued in the Materials Arena and since expectations have been established for license reviewers, RII management is changing the practice from reviewing all actions to a more statistical sampling of outgoing actions.

The review team recommends the RII's biennial IMPEP self assessment be identified as a good practice. On following-up on identified issues, the review team found that the recent IMPEP self assessment had identified the same or similar issues in all the common and non-common performance indicators, and RII had already initiated corrective measures.

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

3.5 Response to Incidents and Allegations

In evaluating the effectiveness of RII's actions in responding to incidents, the team examined RII's response to the questionnaire relative to this indicator, evaluated selected incidents reported for RII in NMED against those contained in RII's files, and evaluated the casework and supporting documentation for 10 material incidents. A list of the incident casework examined with case-specific comments is included in Appendix E. The team also reviewed RII's response to ten allegations involving radioactive materials.

The team discussed RII's incident and allegation procedures, file documentation, NMED, and notification of incidents to the NRC Operations Center with DNMS staff and management. The responsibility for initial response and follow-up actions to materials incidents rests with DNMS. All incidents are promptly evaluated for the need for onsite investigations. The review team determined that DNMS took prompt, appropriate action in response to incidents. Of the ten incidents reviewed, the review team observed that RII consistently addressed health and safety issues in incident follow-up. The review team found that DNMS' level of effort expended on incidents was appropriate and commensurate with the potential health and safety significance of the incidents. DNMS staff adequately and clearly identified licensees' noncompliance issues and, as appropriate, initiated enforcement actions to ensure prompt compliance. In addition, DNMS coordinated materials incident responses with other NRC offices and, when appropriate, with other regulatory jurisdictions (i.e., States) in a timely and effective manner. The review of license files and discussions with staff revealed that Preliminary Notifications (PNs) in response to incidents were documented, and were issued in accordance with regional instructions and IMC 1120, "Preliminary Notifications." PNs received supervisory review and approval before issuance. The review team found good correlation between the PNs issued by RII, the incident information in the licensing files, and the incident information on the NMED system.

The team discussed the recent revisions to the various IMC's requiring the use of NMED by Regional inspection staff in the preparation for inspections. The inspection staff was familiar with NMED and review of inspection records and observations during the inspector accompaniments indicated that the NMED system was being used by the inspection staff. The team found that most NMED records for event files reviewed were accurate and complete, although some of the records were not classified as "complete." Based upon a review of the existing guidance in IMC 2800 and IMC 2600, the team concluded that RII is in conformance with the existing expectations. The review team recommends that NMSS revise the guidance in IMC 2800 and IMC 2600 to clarify the regions responsibility for NMED item updates.

In evaluating the effectiveness of RII's actions in responding to allegations, the review team examined RII's response to the questionnaire relative to this indicator and reviewed the allegations reported for RII in the Allegations Management System against those contained in RII's allegations files, and supporting documentation, for ten allegations. The review team considered RII's actions in the materials area in response to the July 9, 2001, memorandum, "Results of Audit of Allegation Program," from Mr. Edward T. Baker III, Agency Allegation Advisor. In addition, the review team held interviews with the Regional Senior Allegations Coordinator, DNMS managers, and DNMS technical staff on allegation handling.

Responsibility for initial response and follow-up actions to material allegations rests with the Regional Allegations Coordinator, in conjunction with DNMS staff and management. The team's review of casework, associated documents, and interviews with staff revealed that RII has an aggressive, effective, and an efficient program for managing materials allegations. The average time for closing materials allegations containing technical concerns is 110 days. MD 8.8, "Management of Allegations," sets the goal of 180 days. In addition, all Allegation Review Board meetings were held within the MD 8.8 goal of 30 days. Acknowledgment letters, responding to allers, were issued within the performance goal of 30 days.

The review team found that proper procedures were being followed for control and maintenance of allegation materials, in accordance with MD 8.8. DNMS staff received annual allegation training. Moreover, the review team interviews indicated that the RII staff had a clear understanding of the applications of MD 8.8.

The review team noted that internal and external coordination of allegations was appropriate and performed in a timely manner. The results of file reviews showed that DNMS routinely referred cases involving potential wrongdoing to the Office of Investigations for resolution. In addition, the review team noted that allegations involving Agreement States were appropriately managed.

Based on the IMPEP evaluation criteria, the review team recommends that RII's performance with respect to the indicator, Response to Incidents and Allegations, be found satisfactory.

4.0 NON-COMMON PERFORMANCE INDICATORS

IMPEP identifies three non-common performance indicators to be used in reviewing RII's nuclear materials program: (1) Performance with Respect to Operating Plans and Resource Utilization; (2); Regional Fuel Cycle Inspection Program and (3) Site Decommissioning Management Plan and Decommissioning Activities.

4.1 Performance with Respect to Operating Plans and Resource Utilization

4.1.1 Operating Plan Performance

Note: This indicator has been reviewed independently from the IMPEP review, on an ongoing basis, since the time of the last Region II IMPEP in 1998. NMSS reviews each region's Operating Plan performance on a quarterly basis, and includes key licensing and inspection statistics as part of the Agency's Green Book output measures. As such, the IMPEP Working Group has recommended that this indicator no longer be included in subsequent regional IMPEP reports.

RII typically receives and completes action on approximately 500 new applications and amendments each year, and in recent years, has received approximately 100 license renewal applications. Throughout this review period, RII has consistently exceeded expectations for the licensing timeliness metrics. FY 2001 was a typical year, in which RII completed all 47 new applications within 90 days, and 95% of its 453 amendments within 90 days. The region also

completed 98% of its renewals within the 180 day standard. In each case, the metric for acceptable performance was 80% (in FY 2002, this was increased to 85%). RII performed in a similar fashion in FY 1998-1999-2000, and is again exceeding the metric in FY 2002.

As discussed in Section 3.1 of this report, RII met the Operating Plan standards for completing inspection reports in accordance with IMC 2600 and 2800 schedules, had virtually no overdue core inspections in this IMPEP review period, and issued its inspection reports in a timely fashion in accordance with IMC 0610 guidance (within 30 days). Each year, the region completed approximately 250 materials program inspections. In FY 2001, 96% of the written inspection reports were issued on time (versus an NRC goal of 90%).

RII's good operating plan performance is especially noteworthy for early FY02 in light of the resource strains imposed by the NRC's response to the terrorist acts on September 11, 2001.

4.1.2 Resource Utilization

Note: This indicator was reviewed independently from the IMPEP review, on an ongoing basis, since the time of the last Region II IMPEP in 1998. NMSS reviews each region's resource utilization on a quarterly basis. As such, the IMPEP Working Group has recommended that this indicator no longer be included in subsequent regional IMPEP reports.

Other Sections of this report (3.3, 4.2.3, and 4.3.4) include separate detailed discussions of RII's staffing and resource utilization. With respect to the materials program, RII was budgeted 12.4 FTE in FY 2001, but expended only 11.3 FTE. Based on first quarter data for FY 2002, RII is again under-expending. However, this aligns with the staff attrition discussed in Sections 3.3 and 4.2.3, and, as noted in Section 3 of this report, there have been no performance issues identified, and RII has moved quickly to fill its vacancies and train its new staffers.

Based on the IMPEP evaluation criteria, the review team recommends that RII's performance with respect to the indicator, "Performance with Respect to Operating Plans and Resource Utilization," be found satisfactory.

4.2 Regional Fuel Cycle Inspection Program

In conducting this review, four sub-indicators were reviewed to evaluate RII's performance regarding their Fuel Cycle Inspection Program. These sub-indicators include: (1) Status of the Fuel Cycle Inspection Program; (2) Technical Quality of Inspections; (3) Technical Staffing and Training; and (4) Response to Incidents and Allegations. In performing this review, the team interviewed DNMS management and staff, examined fuel cycle inspection reports, reviewed the PIMS, NMED, and allegation files.

4.2.1 Status of Fuel Cycle Inspection Program

The team focused on three factors in reviewing this sub-indicator: inspection frequency, overdue inspections, and timely dispatch of inspection findings to licensees.

Inspections at fuel facilities are coordinated with NMSS and the Regions through an integrated Fuel Cycle Master Inspection Plan, based on considerations of risks, licensee performance, and recent occurrences. In meeting the general guidelines for frequency of inspections in Temporary Instruction 2600/007, RII has prepared detailed written guidance targeting specific plant operations and functional areas for emphasis during inspections. This provides specific guidance based on lessons learned from previous inspections, Licensee Performance Reviews (LPRs), licensing actions, and recent occurrences. Changes to the guidance were well documented and communicated with NMSS and the inspection staff.

RII is using the PIMS to effectively track inspection findings and event information. ADAMS, which provides online access to inspection reports, has improved the coordination of inspections and tracking licensee performance between Regions and Headquarters. RII inspectors have been using PIMS information to identify areas of emphasis and prepare inspection plans.

RII is facing a challenge in inspection resource management. RII, after consulting with NMSS, suspended all physical security inspections at fuel cycle facilities in order to perform security reviews at nuclear power reactors and fuel cycle facilities (post September 11 activities) due to a shortage of qualified inspectors as noted in Section 4.2.3. RII has restarted routine inspections. The team did not observe any other delayed inspections or inspection reports during the IMPEP review period.

4.2.2. Technical Quality of Inspections

The team evaluated the inspection reports and enforcement documentation for eight fuel cycle inspections. In general, inspection findings were well founded, well documented, and in accordance with IMC 610, "Inspection Reports." These reports received proper peer and management review. The review noted that some inspection findings were not characterized in terms of safety and safeguards significance. This has been identified in RII's Self-Assessment for First Quarter FY 2001. Appendix C lists the inspection casework files reviewed for completeness and adequacy with specific comments.

In general, the inspection program appears to focus on the high-risk functional areas. Based on interviews with inspectors, the inspectors have good understanding of risk-informed performance-based inspection philosophy and try to apply it during inspections and in documentation. RII is using PIMS to track past issues at each facility, which include past inspection findings, events, and routine activities at each site. This information is kept current by project inspectors and is used by the inspectors in the planning phase of the inspection to focus on areas that may need more attention. The inspection effort addresses past inspection findings and event follow-up.

During the review period, supervisors performed accompaniments of all inspectors annually. In some cases, some inspectors were accompanied more than once per year. During the review period, RII hired six new inspectors. RII management has performed appropriate inspection observations and accompaniments, focusing on these new inspectors.

One newly qualified inspector was accompanied during an inspection by a review team member on March 4-8, 2002. This accompaniment is identified in Appendix C. The inspector performed in-depth examinations of the licensee's facility; interacted with licensee personnel; observed

licensee's activities; and reviewed pertinent records. During the inspection, the inspector demonstrated a performance based inspection approach with appropriate technical skills and professional inspection techniques. The inspector's performance was adequate to assess the radiological health and safety of the licensee's program.

4.2.3 Technical Staffing and Training

Issues central to the evaluation of this indicator include the fuel cycle inspection program staffing level, technical qualifications of the staff, training, and staff turnover. To evaluate these issues, the review team examined RII's questionnaire responses relative to this indicator, interviewed DNMS management and staff, interviewed members of the RII Division of Resource Management, and considered any possible workload backlogs.

The Fuel Facilities Branch has seen a large influx of new entry-level staff and a departure of five experienced staff. Six of the ten branch technical staff are new to the branch. Of the new staff, three staff are members of the Nuclear Safety Intern Program, two are hired as Senior Resident Inspectors, and one is hired as a Physical Security Inspector. All the new staff are on a rigorous schedule to complete their qualifications. DNMS uses their Training Matrix to coordinate training activities. One new staff member has been qualified as a Fuel Cycle Safety Inspector. The new Physical Security Inspector comes to RII with twenty-one years of experience in the field. The two Senior Resident Inspectors are qualified reactor Resident Inspectors.

The Senior Resident Inspectors are in the process of completing the Fuel Facility Inspector qualifications and each inspector will become the backup inspector for the other inspector's facility. The Senior Resident Inspectors are highly qualified and there are no foreseeable impediments to them receiving full qualifications. The three Nuclear Safety Interns in the Branch participate in the "Big Brother/Big Sister" mentor program. Senior branch staff teach the Interns all about Fuel Cycle Inspection duties, such as conducting an inspection, completing forms, and writing reports to advising the Interns on completing their qualifications for Fuel Cycle Safety Inspector. There are no foreseeable impediments to the Interns receiving full qualifications with the "Big Brother/Big Sister" mentor program and oversight from DNMS management and the DNMS Training Matrix.

DNMS acknowledges there is a staffing and performance challenge with the high staff attrition and large number of entry-level staff. All unqualified staff have schedules to complete their training requirements and one staff member is close to interim qualification. DNMS management conducts a vigilant watch over the qualifications of their staff via the DNMS Training Matrix. The Training Matrix tracks all the courses taken, courses needed, and dates that certain courses are needed for the Division staff. The team did not observe any performance deficiency during the IMPEP review period.

4.2.4. Response to Incidents and Allegations

In evaluating the effectiveness of RII's actions in responding to fuel cycle incidents, the team examined RII's response to the questionnaire relative to this indicator, evaluated selected incidents reported for RII in the Nuclear Material Events Database (NMED) against those contained in RII's files, and evaluated the casework and supporting documentation for two fuel

cycle incidents. A list of the incident casework examined with case-specific comments is included in Appendix E. The team also reviewed RII's response to two allegations involving fuel cycle facilities.

Responses to events appeared to be appropriate. The inspectors receive and evaluate the event information, coordinating with NMSS, to determine RII's action based on the safety and safeguards significance of the events. The description of the event, initial evaluation, causes, precursors, and event follow-up are well documented and reviewed by management.

Based on the IMPEP evaluation criteria, the review team recommends that RII's performance with respect to the indicator, "Regional Fuel Cycle Inspection Program," be found satisfactory.

4.3 Site Decommissioning Management Plan (SDMP)

In conducting this review, six sub-indicators were reviewed to evaluate RII's performance regarding their Site Decommissioning Management Plan (SDMP). These sub-indicators include: (1) Quality of SDMP Decommission Reviews; (2) Financial Assurance for Decommissioning; (3) Termination Radiological Surveys; (4) Inspections; (5) Staff Qualifications; and (6) SDMP Milestones. In performing this review, the review team interviewed DNMS management and staff, examined non-SDMP licensing files, and reviewed financial assurance documents.

Decommissioning and license termination is the responsibility of the MLIB1, MLIB2, and the Fuel Facilities Branch. The types of sites reviewed included sites that required substantial decommissioning actions, such as remediation or final radiological surveys, non-complex decommissioning license terminations, such as Page D.13 for Type I and Type II sites involving sealed sources or limited onsite decontamination and termination radiological surveys.

4.3.1 Quality of SDMP Decommission Reviews

To assess RII's performance on reviews for license terminations, the review team interviewed RII staff and examined docket files for five non-SDMP licenses that were terminated during the review period. Appendix F lists the termination casework files reviewed for completeness and adequacy with specific comments. Note: RII has no SDMP facilities for this review.

Through interviews with RII staff and managers and from examination of files, the review team found that, for most decommissioning sites managed by RII, an individual staff member serves as both the license reviewer and the inspector. Decommissioning licensing review actions undertaken by RII staff include: reviewing the status of sites in accordance with timeliness requirements; reviewing/approving radiological criteria for release of sites; reviewing licensees' decommissioning plans; ensuring adequate financial assurance; reviewing licensees' final status survey plans and reports; and conducting confirmatory surveys.

Licensee decommissioning plans, where required, were reviewed and documented by DNMS in accordance with NRC guidance. For license terminations, RII included closeout documentation in docket files examined by the review team. The "Materials License Termination/Retirement Form," from the "NMSS Handbook for Decommissioning Fuel Cycle and Materials Licensees," and Form 314, "Certificate of Disposition of Materials," were included in the files.

4.3.2 Financial Assurance for Decommissioning

The review team evaluated RII's financial assurance program for conformance with requirements of MD 8.12, "Decommissioning Financial Assurance Instrument Security Program."

To assess the performance of RII for financial assurance, the review team examined the License Tracking System (LTS); reviewed RII's "FY2001 Inventory List of Original Financial Assurance Instruments;" reviewed ten financial assurance instruments in the file, including a comparison with the inventory list information, reviewed RII's annual self-evaluations, security of decommissioning financial assurance instruments, and interviewed licensing staff.

The review team confirmed that RII has staff assigned as a Decommissioning Financial Assurance Instrument Custodian (FAIC), Alternate Custodian (AFAIC), and FAIC manager, in accordance with MD 8.12. The FAIC Manager is the Chief of the MLIB 1. The review team confirmed that the FAIC, AFAIC, and FAIC manager have been designated in writing, and that no one has access to the financial assurance records other than through these individuals, as required by MD 8.12. The review team confirmed that the decommissioning financial assurance instruments are stored in a fire-rated safe, having a fire rating in accordance with MD 8.12. The review team also confirmed that the FAIC maintains an inventory list of the financial assurance instruments held in the safe, and this inventory contains the information required by MD 8.12.

The team reviewed the security of the financial assurance instruments. RII has established check out/in procedures. Instruments that are taken from the safe are noted on a log sheet and returned to the safe before the end of the business day. The safe is checked at the end of each day to ensure that it is locked. This check is noted on a log sheet. Finally, the combination to the safe has recently been changed and only the FAIC, AFAIC, and FAIC manager have the combination.

The team reviewed the self assessment required by MD 8.12 for 1999, 2000, 2001, and 2002. MD 8.12 requires the annual self assessments review of 100% of the files on the inventory list against the guidelines in the Handbook. Additionally, MD 8.12 requires that two evaluations of financial assurance instruments be conducted annually, one by the FAIC or AFAIC and one by the FAIC manager. In 1999, the evaluations by the FAIC and the FAIC manager were performed. In 2000, and 2001 the evaluation by the FAIC was performed. The 2001 FAIC manager was done late, in early 2002, and the FAIC manager evaluation was not done in 2000. The most recent FAIC manager review also noted these discrepancies.

The team compared the inventory list of the financial assurance instruments with the LTS. The team found discrepancies between the inventory list and LTS. However, RII had identified these issues in their self assessment and were in the process of addressing them during the review.

The team reviewed ten financial instruments and found several discrepancies. One of the stand-by trust agreements listed the name of the bank that was providing the letter of credit. However, the bank providing the credit had changed. The FAIC was aware of the issue and had already followed-up with the institution that provided the stand-by trust. The institution indicated that the change in bank providing the line of credit did not affect the trust agreement. One escrow account had the correct licensee name but the wrong license number. Three Statements of Intent did not include documentation that the individual signing the statement was authorized to provide funding

for decommissioning. After consultation with HQ FAIC, it was determined that these issues may delay but will not prevent the execution of these instruments. The HQ FAIC stated that these issues could be resolved at license renewal. During the conference call with the HQ FAIC, regional staff took the opportunity to discuss additional financial assurance scenarios. Regional staff and the reviewer felt that discussion of financial assurance issues would be better handled through refresher training for the entire staff. Therefore, the team recommends that the HQ FAIC provide refresher training and update Regional and HQ staff on changes made to financial assurance guidance.

4.3.3 Termination Radiological Surveys

The review team discussed termination surveys with RII staff and managers and evaluated casework for adequacy of licensee and RII surveys to support license termination. The review team observed that licensee final status survey plans and reports have been prepared in accordance with NUREG/CR-5849, "Manual for Conducting Radiological Surveys in Support of License Termination;" NUREG-1575, "Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM);" or other appropriate methods, and are reviewed by RII staff. The review team concluded that RII's reviews are adequate to ensure that residual radioactivity levels comply with release criteria. Confirmatory or closeout surveys are performed, as necessary, for each licensee's site, by RII or NRC's contractor to validate licensee survey data, as outlined in IMC 2605, Inspection Procedure (IP) 87104, "Decommissioning Inspection Procedure for Materials Licensees," and IP 88104, "Decommissioning Inspection Procedure for Fuel Cycle Facilities."

4.3.4 Inspections

Note: RII has no SDMP facilities to evaluate this sub-indicator for this review.

4.3.5 Staff Qualifications

The review team found that the decommissioning staff is very experienced and highly qualified to perform licensing and inspection functions on decommissioning sites. The staff is knowledgeable about the process and procedures for decommissioning, and the staff follows the process and procedures, as applicable, to each decommissioning site and license termination action. Two staff members from MLIB 1 have completed the additional training required for decommissioning technical reviewers and decommissioning inspectors in IMC 1246. Additional staff have met the old requirements for decommissioning technical reviewers and decommissioning inspectors and are in the process of completing the requirements added by the latest revision of IMC 1246.

4.3.6 SDMP Milestones

Note: RII has no SDMP facilities to evaluate this sub-indicator for this review.

Based on the IMPEP evaluation criteria, the review team recommends that RII's performance with respect to the indicator, Site Decommissioning Management Plan, be found satisfactory.

5.0 SUMMARY

As noted in Sections 3 and 4 above, the review team found RII's performance with respect to each of the performance indicators to be satisfactory. According, the review team recommended and the MRB concurred in finding the RII nuclear material program to be adequate to protect public health and safety. Based on the results of the current IMPEP review, the next full review will be 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 RII.

RECOMMENDATIONS:

1. The review team recommends that NMSS revise the guidance in IMC 2800 and IMC 2600 to clarify regional responsibility for NMED item updates (Section 3.5).
2. The review team recommends that the HQ FAIC provide refresher training and update Regional and HQ staff on changes made to financial assurance guidance (Section 4.3).

GOOD PRACTICES:

1. The review team recommends the RII's management approach of identification of an issue, establishment of the expectations to address the issue and the successful resolution of issue by management be identified as a good practice. This approach was used to resolve licensing inconsistencies identified during IMPEP self assessments. RII management initiated a process which used a senior license reviewer to do a quality control review on all licensing actions prior to issuing the action. As one of the empowerment initiatives being pursued in the Materials Arena and since expectations have been established for license reviewers, RII management is changing the practice from reviewing all actions to a more statistical sampling of outgoing actions (Section 3.4).
2. The review team recommends RII's annual IMPEP self assessment be identified as a good practice. In all the common and non-common performance indicators, the review team found issues which in following-up on the issues, the team would determine that the recent IMPEP self assessment had identified the same or similar issues and RII had already initiated corrective measures (Section 3.4).

LIST OF APPENDICES AND ATTACHMENTS

Appendix A	IMPEP Review Team Members
Appendix B	Region II Organization Charts
Appendix C	Inspection Casework Reviews and Accompaniments
Appendix D	License Casework Reviews
Appendix E	Incident Casework Reviews
Appendix F	Decommissioning Casework Reviews

APPENDIX A

IMPEP REVIEW TEAM MEMBERS

Name	Area of Responsibility
Charles R. Cox, NMSS/IMNS	Team Leader Technical Quality of Inspections Inspection Accompaniments Response to Incidents and Allegations
Yen-Ju Chen, NMSS/FCSS	Fuel Cycle
Frederick Brown, NMSS/IMNS	Technical Quality of Inspections Status of Materials Inspection Program
Gary Purdy, NMSS/DWM	Site Decommissioning Management Plan Response to Incidents and Allegations
Jared Thompson, Arkansas	Technical Quality of Licensing Actions
Alvin Henry, NMSS/DWM	Technical Staffing and Training Response to Incidents and Allegations

APPENDIX B

REGION II

DIVISION OF NUCLEAR MATERIAL SAFETY

ORGANIZATION CHART