

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF NRC REGION I PROGRAM

April 4-8, 2005

# DRAFT REPORT

U.S. Nuclear Regulatory Commission

ADAMS ML051170120

## 1.0 INTRODUCTION

This report presents the results of the review of the Region I (RI) materials program. The review was conducted during the period of April 4-8, 2005, by a review team comprised of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the State of Oklahoma. 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 February 26, 2004, revision to NRC Management Directive (MD) 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period March 2001 to April 2005, were discussed with RI management on April 8, 2005.

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

The RI 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 RI materials program regulated more than 2400 specific material licenses.

In preparation for the review, a questionnaire addressing the common and non-common indicators was sent to RI on January 28, 2005. RI provided a response to the questionnaire on March 18, 2005. A copy of the completed questionnaire response can be found on NRC's Agency-wide Document Access and Management System (ADAMS) using Accession Number ML051170112.

The review team's general approach for conduct of this review consisted of: (1) examination of RI's response to the questionnaire; (2) analysis of quantitative information from the licensing, inspection, and allegation databases, as well as ADAMS; (3) technical review of selected licensing, inspection, incident response, allegation, and decommissioning actions or files; (4) field accompaniments of six RI 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 RI's performance.

Section 2 below discusses RI'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. The team had no recommendations.

## 2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

During the previous IMPEP review, which concluded on March 19, 2001, one recommendation was made. The team's review of the current status of the recommendation is as follows:

1. The review team recommends that RI follow the financial assurance requirements of MD 8.12 and that RI effectively follow-up on issues and comments raised in the annual evaluations of the financial assurance files (Section 4.2.2).

Current Status: RI is following the financial assurance requirements of MD 8.12 and is effectively following-up on issues and comments raised in the annual evaluations of the financial assurance files. 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) 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 radioactive materials program staffing level, technical qualifications of the staff, training, and staff turnover. To evaluate these issues, the review team examined RI's questionnaire responses relative to this indicator, interviewed DNMS management and staff, interviewed RI Division of Resource Management staff, and considered any possible workload backlogs.

At the end of FY04, the Region completed consolidation of regional materials programs between Regions I and II. The result of the consolidation was a 2 FTE savings to the Agency. All management positions are located in King of Prussia and the Division reorganized so that the branches have staff located in King of Prussia and Atlanta. DNMS was reorganized with four branches (Medical Branch, Commercial and R&D Branch, Materials Security and Industrial Branch, and a Decommissioning Branch) and a Licensing Assistance Team at the Division level. Including non-technical overhead positions, DNMS had 55 staff members on-board at the time of the review, four of which are Atlanta-based staff. Funding for direct technical positions comes from the Nuclear Materials Safety Arena (30.7 FTE), the Nuclear Waste Safety Arena (6.4 FTE), Nuclear Materials Security Arena (6.5 FTE), and the Office of State and Tribal Programs (2.25 FTE).

As a result of internal transfers to Region II programs and retirements from both Atlanta and King of Prussia, the consolidated program has been challenged in reaching its full complement of staff. Nineteen new technical staff members have been hired into DNMS since the last IMPEP review. During the review period, sixteen DNMS staff members left the program. DNMS had three vacancies (2 Health Physicists (HP); 1 Branch Chief(BC)) at the time of the onsite review. The HP positions have been vacant for approximately five months. DNMS is actively recruiting and expects to fill these positions shortly. The BC for the Decommissioning Branch will be transferring within the region, and DNMS expects to fill this position at the time of the transfer.

The review team examined the training spreadsheet, spot-checked individual inspector's qualifications, and interviewed managers, concerning technical training in accordance with IMC 1246 requirements. The review team found a good balance of personnel between licensing and inspection. With RI's organization, most technical staff in DNMS complete both licensing and inspection actions, rather than having separate license reviewers and inspectors. All staff in each branch are fully qualified for the work they perform. With just eleven exceptions, all the technical staff in RI were fully qualified inspectors at the time of the onsite review. Of these eleven exceptions, seven are interim qualified, and they will be fully qualified by October 2005. Of the technical staff members who work on materials and decommissioning issues, nineteen have full signature authority for licensing actions they perform, and nine have limited signature authority for licensing actions they perform. Fourteen technical staff have no signature authority for licensing actions, so any licensing work they perform is reviewed and signed by a qualified reviewer or supervisor. The review team determined that the number of license reviewers with full or limited signature authority is sufficient to complete RI's materials licensing work, and allows for readjustments in the workload between materials licensing and inspection, as necessary.

The Region's continued strength is its highly qualified, experienced and diverse technical staff. The staff includes a number of individuals with Master's and Doctorate degrees, as well as certification by the American Board of Health Physics. Many of the staff have extensive experience in both materials and reactor applications of health physics, as well as State and private sector experience. The staff is also actively involved in professional societies, such as the Health Physics Society, at both local and national levels. The Region has implemented a mentoring program, whereby senior staff meet with new hires to ensure that these staff are progressing in their training and development to attain licensing and inspection qualifications. This program enhances the training and development experience for these staff and reduces the impact on the Branch Chiefs.

Management of remotely-located staff in Atlanta was identified by the Region as a challenge for the consolidated Region I materials program. The Region recognizes the need to continue its effort to assure that staff in Atlanta are fully integrated into its operations and receive the tools and training to perform licensing and inspection functions consistently. The team found that the Region is working to meet this challenge, and recognizes that this will be a continuous effort.

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

### 3.2 Status of Materials Inspection Program

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

At the beginning of FY04, the Region completed a consolidation of Regions I and II Materials programs. The Region increased the number of inspections by 800 licensees as a result of the consolidation.

The team reviewed RI's inspection priorities during the period and found that the inspection frequencies for various types of licenses were consistent with program office guidance, as provided in Inspection Manual Chapter (IMC) 2800 dated November 25, 2003. 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 inspection frequencies unless the next inspection date is intentionally reduced or extended by the technical staff. The Region reduced an individual licensee's inspection schedule, based on the licensee's inspection findings (i.e., escalated enforcement).

In their response to the IMPEP questionnaire, RI indicated that there were two initial inspections overdue by more than 25 percent of the assigned frequency. Both were priority 5 licensees and RI completed the inspections prior to the end of the on-site IMPEP review.

During the review period, RI issued 483 initial licenses. The vast majority, 481 of 483, were inspected within the assigned inspection frequency. The other two licensees were inspected within 14 months.

During the review period, RI consistently met the reciprocity inspection goals as established in IMC 1220.

The timeliness of the issuance of inspection findings was evaluated during the inspection casework review. For the routine inspection files examined, 99% of the inspection findings were sent to the licensees within 30 days.

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

### 3.3 Technical Quality of Inspections

The team evaluated the inspection reports, enforcement documentation, and inspection documentation and interviewed inspectors for 24 materials inspections conducted during the review period. Twenty-two of RI's materials inspectors' casework were reviewed. The casework covered inspections of various license types, including: medical institutions, high dose rate remote afterloaders (HDR), industrial radiography, portable gauges, waste disposal, research and development, decommissioning reactor, complex decommissioning, and independent spent fuel storage installation (ISFSI). Appendix C lists the inspection casework files reviewed for completeness and adequacy with specific comments.

During the review, the team determined that RI is performing inspections of materials licensees in accordance with IMC 2800 dated November 25, 2003. Inspectors reviewed previous open items and past violations during the inspections. For the cases reviewed, inspection reports were thorough, complete, and of high quality, with sufficient documentation to ensure that

licensee's performance with respect to health and safety was acceptable. Inspection findings lead to appropriate and prompt regulatory action. Based on the casework, routine inspections covered all aspects of the licensees' radiation programs commensurate with licensed activities.

The team determined that DNMS Branch Chiefs are accompanying all inspectors at least once each year. The experience level of the inspector is taken into account in the accompaniment schedule, with a higher priority given to new inspectors.

Six Regional inspectors (two were in training) were accompanied during inspections by a review team member during the weeks of March 14 and March 21, 2005. Inspection accompaniments were conducted on inspections as follows: two broad-scope medical; industrial radiographer; and research and development. These accompaniments are identified in Appendix C.

During the accompaniments, each inspector demonstrated appropriate inspection techniques and knowledge of the regulations. The inspectors were trained, prepared, and thorough in their inspections of the licensees' radiation safety programs. Overall, each inspector utilized good health physics practices, their interviews with licensee personnel were performed in an effective manner, and their inspections were adequate to assess radiological health and safety at the licensed facilities.

The team found that RI maintains a sufficient number of various models of survey instruments to perform radiological surveys of materials licensees. The review team examined instrumentation and observed that the survey instruments in RI's office at the time of the onsite review were calibrated and operable. Instrument calibrations are performed by a licensed calibration facility. All samples are sent to a contractor radioanalytical laboratory for analysis.

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

### 3.4 Technical Quality of Licensing Actions

The review team examined completed licensing casework and interviewed the staff for 28 specific licenses, and interviewed the Branch Chief and various license reviewers. 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: medical broad; broad academic; nuclear laundry; industrial radiography; service provider;



portable gauge; self-shielded irradiator; mobile medical; gamma knife; medical, both diagnostic and therapy and medical distribution. Types of licensing actions selected for evaluation included five new licenses, four renewal, twelve amendments, two notifications, two financial assurance, and five terminations. A list of the licenses evaluated with case-specific comments can be found in Appendix D.

Overall, the team found that the licensing actions were thorough, complete, consistent, of high quality, and properly addressed health and safety issues. The files 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 maintained very well. The review team found that each of the reviewed docket files was complete and orderly.

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

### 3.5 Response to Incidents and Allegations

The review team examined RI's response to the questionnaire relative to this indicator, evaluated selected incidents from the list of Nuclear Material Events Database (NMED) entries reported in the questionnaire against those contained in RI's licensing files, and evaluated the efforts and supporting documentation for 10 material incidents. A list of the incidents examined with case-specific comments is included in Appendix E. The team also reviewed RI's response to 11 allegations, the actions take, and the files associated with them.

The review team discussed RI's incident and allegation procedures, file documentation, NMED, RI staff and management. All incidents reviewed were evaluated quickly for the need for onsite investigations, with several special inspections occurring within a relative short time (a few to a week of an incident notification). RI took prompt, appropriate action in response to incidents. For less significant health and safety issues, RI appropriately deferred licensee actions to the next routine inspection. Of the 10 incidents reviewed, the review team considered DNMS' level of effort expended on incidents was correct and commensurate with the potential health and safety significance of the incidents. RI staff adequately and clearly identified licensees' noncompliance issues and, as appropriate, initiated enforcement actions. In addition, RI coordinated materials incident responses with other NRC offices and, when appropriate, with other regulatory jurisdictions (i.e., States) in a timely and effective manner. When comparing the Preliminary Notices (PNs) generated for some of the incidents, the review team found good correlation between the PNs issued, the incident information in the licensing files, and the incident information on the NMED system.

The review team noted the efforts to work with the NMED system by RI Staff. There has been increased efforts to complete NMED records by providing essential details necessary to classify an NMED record as "complete." There has been increased email correspondence between RI staff and the NMED contractor to provide detailed information to contractor inquiries to

complete records. The review team also noted that an inspector indicated that the NMED system is scanned for licensee entries prior to commencing an inspection at a licensee's facility.

The review team examined RI's response to the questionnaire relative to allegations, and compared 11 allegations in the Allegations Management System against those contained in RI's allegations files, and supporting documentation contained in the licensee file and ADAMS. The review team noted that the results of the last annual audit of the allegation program, performed on April 19-21, 2004, did not identify any findings the program needed to address. In addition, the review team held interviews with the Regional Allegations Coordinator, RI managers, and RI technical staff on allegation handling.

The Senior Allegations Coordinator generates a report on a monthly basis that details the status of all open allegations, and disseminates this information to all RI managers. DNMS management and the allegations staff hold a monthly meeting to discuss the status and progress in meeting its allegation performance goals, and to focus on actions necessary to ensure prompt and procedurally correct follow-up of open allegations. These meetings provide the opportunity for DNMS managers to provide close attention to allegations under their responsibility. A new performance matrix since the last IMPEP tracks percent of allegations that are received by the Senior Allegation Coordinator within 5 days of initial contact with an alleege, the number of Allegation Review Boards (ARB) conducted within 30 days of initial contact of an allegation, acknowledgment of the allegation by letter timeliness within 30 days, and the time to closing an allegation within 150 days. The last three monthly reviews indicate that the all matrix goals have been met 100 percent of the times for material allegations.

ARB meetings are scheduled bi-weekly; this routine scheduling allows for easily meeting the 30 day matrix goal between receipt and ARB review of an allegation. The team observed an ARB meeting on April 6, 2004. The meeting was well attended, with representatives from the technical division responsible for the allegation, the responsible branch chief, the Allegation Coordinator Office and Office of Investigation, Office of Enforcement, and the Deputy DNMS. A recorder present concentrated on documenting, via computer projection, the proceedings, decisions, and actions determined in the meeting, eliminating transcription, concurrence delays and circulation of meeting minutes. The meeting was brisk, focused, and aggressive in determining the next appropriate action to address the allegation issues and bring the issue to closure.

The review team noted that the filing system maintained of the Office Allegation Coordinator indicates great care and effort in the meticulous organization and completeness of the records.

The review team found copies of an Allegation Receipt Review form and an Allegation Review Board form in a licensing file. This was considered an isolated incident and not programmatic.

Based on the IMPEP evaluation criteria, the review team recommends that RI'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 Regional materials program: (1) the Uranium Recovery Program; (2) Regional Fuel Cycle Inspection Program; and (3) Site Decommissioning Management Plan and Decommissioning Activities. RI's material program does not cover Uranium Recovery and Regional Fuel Cycle Inspection Program, so only the last non-common performance indicator was applicable to this review.

##### 4.1 Site Decommissioning Management Plan

The Complex Site Decommissioning Plan includes sites that involve decommissioning issues that present varying degrees of radiological hazard, remediation complexity, and cost. These unique and difficult sites have buildings, former waste disposal areas, large piles of tailings, ground water, and soil contaminated with low levels of uranium or thorium (source material), or other radionuclides. In RI, complex decommissioning sites that required substantial decommissioning actions, such as remediation or final radiological surveys, were the responsibility of the Decommissioning Branch. Non-complex decommissioning license terminations, such as for Group I licensees, were assigned to the Materials Licensing Branch.

In conducting this review, six sub-indicators were reviewed to evaluate RI's performance regarding complex site decommissioning. These sub-indicators included: (1) Quality of Decommission Reviews; (2) Financial Assurance for Decommissioning; (3) Termination Radiological Surveys; (4) Inspections; and (5) Staff Qualifications. In performing this review, the review team interviewed DNMS management and staff, examined decommissioning files, group I licensee files, and reviewed financial assurance documents. Appendix F contains the complex site decommissioning files reviewed.

##### 4.1.1 Quality of Complex Decommissioning Reviews

To assess RI's performance on reviews for license terminations, the review team interviewed RI staff and examined files for 3 complex sites, 2 non-complex sites that were terminated or undergoing decommissioning activities during the review period.

Decommissioning licensing review actions undertaken by RI staff for Complex sites included: reviewing the status of sites in accordances with timeliness requirements; establishing 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.

The review team found that licensees' decommissioning plans were appropriately reviewed by RI in accordance with IMC 2605, "Decommissioning Procedures for Fuel Cycle and Materials Licensees;" the Decommissioning Handbook; and the new NUREG-1727, "NMSS Decommissioning Standard Review Plan," when applicable. Through a review of the docket files and discussion with license reviewers and the Branch Chief, the review team concluded that RI decommissioning actions addressed licensee health and safety conditions appropriately

Decommissioning licensing review actions undertaken by RI staff for non-complex sites included: 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, final status survey results, and closeout documentation were reviewed and documented by DNMS in accordance with applicable NRC guidance.

#### 4.1.2 Financial Assurance for Decommissioning

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

To assess the performance of RI for financial assurance, the review team examined the LTS; reviewed RI's "FY2005 Inventory List of Original Financial Assurance Instruments;" reviewed ten financial assurance instruments in the file, including a comparison with the inventory list information, and evaluated RI's annual self-evaluations of the security of decommissioning financial assurance instruments, for the period of the review, required by MD 8.12. The review team followed-up on these activities with reviews of selected docket files and interviews with decommissioning staff.

The review team confirmed that RI has staff assigned as 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 Decommissioning Branch. 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 self assessment required by MD 8.12 for 2005. MD 8.12 requires the annual self assessments review of 100 percent 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 Custodian or Alternate, and one by the Manager. All of the reviewed audits met the requirements of MD 8.12.

The team reviewed the security of the financial assurance instruments. RI has established check out/in procedures. Each time the safe is opened and closed, an entry is made on a log sheet. Instruments that are taken from the safe are returned before the end of the business day.

The team compared the inventory list of the financial assurance instruments with the LTS. The team found minor administrative discrepancies between the inventory list and LTS. These minor discrepancies would not prevent the execution of the financial instruments.

#### 4.1.3 Termination Radiological Surveys

The review team discussed termination surveys with RI staff and managers and evaluated casework for adequacy of licensee and NRC 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 RI staff. The review team concluded that RI's reviews are adequate to ensure that residual radioactivity levels comply with release criteria. NRC confirmatory or closeout surveys are performed, as necessary, for each licensee's site, by RI or NRC's contractor to validate licensee survey data, as outlined in IMC 2605 and in Inspection Procedure (IP) 87104, "Decommissioning Inspection Procedure for Materials Licensees."

#### 4.1.4 Inspections

The review team evaluated the number of inspections performed at complex decommissioning sites during the review period. RI indicated that it has performed all inspections in accordance with IMC 2602, "Decommissioning Inspection Program for Fuel Cycle Facilities and Materials Licensees," and that no decommissioning inspections were overdue. Closeout inspections are performed, as appropriate, to terminate licenses.

#### 4.1.5 Staff Qualifications

Refer to Section 3.1 of this report.

#### 4.1.6 Conclusion

Based on the IMPEP evaluation criteria, the review team recommends that RI'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 RI's performance with respect to each of the performance indicators to be satisfactory. Accordingly, the review team recommends finding the RI material program to be adequate to protect public health and safety. Based on the results of the current IMPEP review, the review team recommends that the next full review be in approximately four years.

Below are the recommendations, as mentioned earlier in the report, for evaluation and implementation, as appropriate, by RI or NMSS.

## **LIST OF APPENDICES AND ATTACHMENTS**

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Appendix D	License Casework Reviews
Appendix E	Incident Casework Reviews
Appendix F	Decommissioning Casework Reviews

## APPENDIX A

### IMPEP REVIEW TEAM MEMBERS

<b>Name</b>	<b>Area of Responsibility</b>
Charles R. Cox, NMSS/IMNS	Team Leader
Andrew Mauer, STP	Technical Staffing and Training
Christopher Martin, RIII	Status of Materials Inspection Program Technical Quality of Inspections Site Decommissioning Management Plan
Pamela Bishop, New Mexico	Technical Quality of Licensing Actions
Joseph DeCicco, NMSS/IMNS	Response to Incidents and Allegations



APPENDIX B

REGION I

DIVISION OF NUCLEAR MATERIAL SAFETY

ORGANIZATION CHART

APPENDIX C  
INSPECTION CASEWORK REVIEWS

NOTE: ALL INSPECTIONS LISTED WITHOUT COMMENT ARE INCLUDED FOR COMPLETENESS ONLY; NO SIGNIFICANT COMMENTS WERE IDENTIFIED BY THE IMPEP TEAM.

File No.: 1	
Licensee: Arch Chemicals, Inc.	License No.: 06-08166-02
Location: Cheshire, CT	Inspection Type: Routine
Inspection Date: 6/11/02	Priority: 5
	Inspector: JJ

File No.: 2	
Licensee: Canberra Dover, Inc.	License No.: 29-04236-01
Location: Dover, NJ	Inspection Type: Routine
Inspection Date: 7/14/04	Priority: 2
	Inspector: KM

File No.: 3	
Licensee: Certified Testing Laboratories, Inc.	License No.: 29-14150-01
Location: Bordentown, NJ	Inspection Type: Routine
Inspection Date: 5/23/01	Priority: 1
	Inspector: JJ

File No.: 4	
Licensee: Chase Environmental Group, Inc.	License No.: 201-605-90(KY)
Location: Paterson, NJ & Springhouse, PA	Inspection Type: Reciprocity
Inspection Date: 8/26/2004	Priority: 3
	Inspector: BU

File No.: 5	
Licensee: Clara Maass Medical Center	License No.: 29-03163-03
Location: Belleville, NJ	Inspection Type: Routine
Inspection Date: 12/9-10/03	Priority: 2
	Inspector: SC

File No.: 6	
Licensee: Danville Regional Medical Center	License No.: 29-14150-01
Location: Danville, VA	Inspection Type: Routine
Inspection Date: 8/3/04	Priority: 2
	Inspector: SG/RR

File No.: 7	
Licensee: Digirad Imaging Solutions, Inc.	License No.: 31-30666-01
Location: Bemus Point, NY	Inspection Type: Routine
Inspection Date: 2/14/05	Priority: 3
	Inspector: MB

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File No.: 8

Licensee: Eastern Isotopes, Inc.

Location: Sterling, VA

Inspection Date: 2/2/05

License No.: 45-25221-01MD

Inspection Type: Routine

Priority: 2

Inspector: TT/DE

File No.: 9

Licensee: Hayes Testing Laboratory, Inc.

Location: Louisville, IN

Inspection Date: 8/5/04

License No.: 201-168-05(KY)

Inspection Type: Reciprocity

Priority: 1

Inspector: TG

File No.: 10

Licensee: HNTB Corporation

Location: Fairfield, NJ

Inspection Date: 8/8/01

License No.: 29-19862-01

Inspection Type: Routine

Priority: 5

Inspector: ST-S/KM

File No.: 11

Licensee: St. Lukes Hospital

Location: Bethlehem, PA

Inspection Date: 8/17/04

License No.: 37-07939-01

Inspection Type: Routine

Priority: 2

Inspector: RM

File No.: 12

Licensee: Department of the Navy

Location: Bethesda, MD

Inspection Date: 4/23/04

License No.: 45-23645-01NA

Inspection Type: Routine

Priority: 2

Inspector: JS/DD-T

File No.: 13

Licensee: Radiation Medicine Specialists of Northeast  
Pennsylvania, P.C.

Location: Bethesda, MD

Inspection Date: 2/17/04

License No.: 37-30549-01

Inspection Type: Routine

Priority: 2

Inspector: RM

File No.: 14

Licensee: St. Joseph's Regional Medical center

Location: Paterson, NJ

Inspection Date: 12/23/03

License No.: 29-10191-02

Inspection Type: Routine

Priority: 2

Inspector: RM

File No.: 15

Licensee: Testwell Laboratories, Inc

Location: Ossining, NY

Inspection Date: 9/18/02

License No.: 2930-4164(NY)

Inspection Type: Reciprocity

Priority: 2

Inspector: KM/DW

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File No.: 16

Licensee: Thomas Jefferson University Hospital, Inc.  
Location: Philadelphia & Doylestown, PA  
Inspection Date: 12/16-19/03

License No.: 37-00148-06  
Inspection Type: Routine  
Priority: 2  
Inspector: JD

File No.: 17

Licensee: Thomas Jefferson University Hospital, Inc.  
Location: Philadelphia, PA  
Inspection Date: 12/16-19/03

License No.: 37-00148-07  
Inspection Type: Routine  
Priority: 5  
Inspector: JD

File No.: 18

Licensee: Thomas Jefferson University Hospital, Inc.  
Location: Philadelphia, PA  
Inspection Date: 12/16-19/03

License No.: 37-00148-08  
Inspection Type: Routine  
Priority: 2  
Inspector: JD

File No.: 19

Licensee: Glen A. Vahjen, M.D.  
Location: Hamden, CT  
Inspection Date: 9/16/04

License No.: 06-28707-01  
Inspection Type: Routine  
Priority: 3  
Inspector: SC

File No.: 20

Licensee: University of Virginia  
Location: Charlottesville, VA  
Inspection Date: 3/15-17/04

License No.: 06-45-00034-26  
Inspection Type: Reactive  
Priority: 2  
Inspector: BP/JD

File No.: 21

Licensee: Women's Medical Hospital  
Location: Philadelphia, PA  
Inspection Date: 8/17/04

License No.: 37-30485-01  
Inspection Type: Routine  
Priority: 2  
Inspector: DE/SH

File No.: 22

Licensee: York Hospital  
Location: York, PA  
Inspection Date: 10/8/02

License No.: 37-07161-01  
Inspection Type: Routine  
Priority: 2  
Inspector: MB/SG

Accompaniment No.: 1

Licensee: Bayer Pharmaceuticals Corporation  
Location: West haven, CT  
Inspection Date: 3/15/05

License No.: 06-13053-04  
Inspection Type: Routine  
Priority: 3  
Inspector: JN

Accompaniment No.: 2

Licensee: Hackensack Medical Center

Location: Hackensack, NJ

Inspection Date: 3/16/05

License No.: 29-02641-03

Inspection Type: Routine

Priority: 2

Inspector: MB/MS

Accompaniment No.: 3

Licensee: Huntington Testing and Technology

Location: Kenova, WV

Inspection Date: 3/21/05

License No.: 47-23076-01

Inspection Type: Routine

Priority: 1

Inspector: DJ

Accompaniment No.: 4

Licensee: Washington Hospital Center

Location: Washington, DC

Inspection Date: 3/22-23/05

License No.: 08-03604-03

Inspection Type: Routine

Priority: 2

Inspector: PL/RR

Accompaniment No.: 5

Licensee: Washington Hospital Center

Location: Washington, DC

Inspection Date: 3/22-23/05

License No.: 08-03604-05

Inspection Type: Routine

Priority: 2

Inspector: PL/RR

## APPENDIX D

### LICENSE CASEWORK REVIEWS

NOTE: ALL LICENSES LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS ONLY; NO SIGNIFICANT COMMENTS WERE IDENTIFIED BY THE IMPEP TEAM.

File No.:	1	License No.:	01-30362-01
Licensee:	Eastern Technologies, Inc	Amendment No.:	NA
Location:	Ashford, AL	Type of Action:	New
Date Issued:	11/10/2004	License Reviewer:	(J5)

File No.:	2	License No.:	37-30804-02
Licensee:	CFC Logistics	Amendment No.:	NA
Location:	Quakertown, PA	Type of Action:	New
Date Issued:	8/27/2003	License Reviewer:	(Q2)

File No.:	3	License No.:	37-28246-01
Licensee:	Health Physics Associates	Amendment No.:	NA
Location:	Lenhartsville, PA	Type of Action:	New
Date Issued:	01/25/2005	License Reviewer:	(L7)

File No.:	4	License No.:	06-37064-02MD and -01
Licensee:	Advanced Care Pharmacy, LLC	Amendment No.:	NA
Location:	Woodbury, CT	Type of Action:	New
Date Issued:	12/24/2002	License Reviewer:	(P7)

#### Comments:

- b) An e:mail mentioned in other documents and a deficiency letter dated November 26, 2002 were not in file or ADAMS.
- c) License No 06-37064-02MD was not in ADAMS.

File No.:	5	License No.:	37-30485-01
Licensee:	Tenet Health System - MCP	Amendment No.:	09
Location:	Philadelphia, PA	Type of Action:	Amendment
Date Issued:	8/29/2003	License Reviewer:	(P6)



File No.: 6  
Licensee: University of Pennsylvania  
Location: Philadelphia, PA  
Date Issued: 12/10/2002

License No.: 37-00118-07  
Amendment No.: 62  
Type of Action: Amendment  
License Reviewer: (P6)

Comment:

- a) An attachment mentioned in a fax received 4/11/2002 was not in the file or in ADAMS

File No.: 7  
Licensee: University of Pennsylvania  
Location: Philadelphia, PA  
Date Issued: 12/10/2002

License No.: 37-11826-01  
Amendment No.: 42  
Type of Action: Amendment  
License Reviewer: (P7)

Comment:

- a) No amendment application could be found in the file or in ADAMS. Per the cover letter for the renewal dated February 24, 2004, this amendment was separated out from the renewal application to expedite issuance of the renewal.

File No.: 8  
Licensee: Foundation Engineering  
Location: San Juan, Puerto Rico  
Date Issued: 4/20/2001

License No.: 52-23072-02  
Amendment No.: NA  
Type of Action: New  
License Reviewer: (G4)

File No.: 9  
Licensee: County of Henrico  
Location: Richmond, VA  
Date Issued: 10/4/2002

License No.: 45-17293-03  
Amendment No.: 05  
Type of Action: Renewal  
License Reviewer: G7

File No.: 10  
Licensee: Inova Alexandria Hospital  
Location: Alexandria, VA  
Date Issued: 7/17/2001

License No.: 45-09358-02  
Amendment No.: 38  
Type of Action: Renewal  
License Reviewer: (G7)

Comment:

- a) The deficiency letter, telephone call or e:mail to which the licensee responded on June 29, 2001 was not documented in the file or in ADAMS.

File No.: 11  
Licensee: Southeastern Imaging  
Location: Martinsville, VA  
Date Issued: 4/14/2004

License No.: 45-25272-01  
Amendment No.: 05  
Type of Action: Renewal  
License Reviewer: (H0)

Comment:

- a) The deficiency letter, telephone call or e:mail to which the licensee responded on April 13, 2004 was not documented in the file or in ADAMS.

File No.: 12  
Licensee: Spin X  
Location: Dorado, Puerto Rico  
Date Issued: 4/23/2004

License No.: 52-25577-01  
Amendment No.: 02  
Type of Action: Termination  
License Reviewer: (G4)

Comment:

- a) Documentation of the receipt of sources by Mechanical Integrity Solutions 52-25615-01 was not in the file or in ADAMS.

File No.: 13  
Licensee: Lessig Nuclear Associates  
Location: Newark, DE  
Date Issued: 9/14/2001

License No.: 07-16167-01  
Amendment No.: 24  
Type of Action: Termination  
License Reviewer: (J1)

File No.: 14  
Licensee: Capital Health System At Fuld  
Location: Trenton, NJ  
Date Issued: 3/29/2005

License No.: 29-06134-01  
Amendment No.: 46  
Type of Action: Termination  
License Reviewer: (J2)

File No.: 15  
Licensee: SAIC – Frederick, Inc  
Location: Frederick, MD  
Date Issued: 8/10/2004

License No.: 19-21091-01  
Amendment(s) No.: NA  
Type of Action: Financial Assurance  
License Reviewer: (Q5)

File No.: 16  
Licensee: Conopco  
Location: Englewood Cliffs, NJ  
Date Issued: 3/21/2005

License No.: 29-30984-01  
Amendment No.: NA  
Type of Action: New and Financial Assurance  
License Reviewer: (L4)

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File No.: 17  
Licensee: Cardiology Associates  
Location: Norwich, CT  
Date Issued: 10/08/2004

License No.: 06-30793-0  
Amendment No.: NA  
Type of Action: Notification  
License Reviewer: (H0)

File No.: 18  
Licensee: Virginia Heart Group  
Location: Philadelphia, PA  
Date Issued: 3/7/2005

License No.: 45-25258-01  
Amendment No.: 3  
Type of Action: Notification and Amendment  
License Reviewer: (Q9)

File No.: 19  
Licensee: Robert Wood Johnson Univ. Hospital  
Location: New Brunswick, NJ  
Date Issued: 2/19/2002

License No.: 29-10173-02  
Amendment No.: 45  
Type of Action: Amendment  
License Reviewer: (K3)

File No.: 20  
Licensee: Alonso & Carus Iron Works  
Location: Cantaña, Puerto Rico  
Date Issued: 6/27/2001

License No.: 52-21350-01  
Amendment No.: 4  
Type of Action: Amendment  
License Reviewer: (G8)

Comments:

a) Approved sources and devices are not listed on the license.

File No.: 21  
Licensee: Chandra K. Sacheti, M.D.  
Location: Vernon, CT  
Date Issued: 8/17/2004

License No.: 06-30781-01  
Amendment No.: NA  
Type of Action: Notification  
License Reviewer: (Q8)

File No.: 22  
Licensee: University of Delaware  
Location: Newark, DE  
Date Issued: 9/12/2003

License No.: 07-01579-19  
Amendment No.: 30  
Type of Action: Amendment  
License Reviewer: (K8)

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File No.: 23  
Licensee: National Aeronautics & Space Admin.  
Location: Greenbelt, MD  
Date Issued: 11/12/2003

License No.: 19-05748-03  
Amendment No.: 26  
Type of Action: Amendment  
License Reviewer: (P3)

File No.: 24  
Licensee: Greater Southeast Community Hospital  
Location: Washington, DC  
Date Issued: 9/7/2001

License No.: 08-11182-01  
Amendment No.: 60  
Type of Action: Amendment  
License Reviewer: (K4)

File No.: 25  
Licensee: Mobile Diagnostics, LLC  
Location: Huntington, WV  
Date Issued: 3/23/2005

License No.: 47-30941-01  
Amendment No.: 01  
Type of Action: Amendment  
License Reviewer: (J3)

File No.: 26  
Licensee: St. Vincent Health Center  
Location: Erie, PA  
Date Issued: 3/31/2004

License No.: 37-05125-01  
Amendment No.: 72  
Type of Action: Amendment  
License Reviewer: (J3)

File No.: 27  
Licensee: Allegheny Lab  
Location: Kennerdell, PA  
Date Issued: 10/10/2001

License No.: 37-20734-01  
Amendment No.: 10  
Type of Action: Termination  
License Reviewer: (Q2)

File No.: 28  
Licensee: Ocean Radiation Oncology  
Location: Lakewood, NJ  
Date Issued: 3/29/2005

License No.: 29-30518-01  
Amendment No.: 01  
Type of Action: Termination  
License Reviewer: (J2)

## APPENDIX E

### INCIDENT CASEWORK REVIEWED

NOTE: ALL INCIDENTS LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS ONLY; NO SIGNIFICANT COMMENTS WERE IDENTIFIED BY THE IMPEP TEAM.

File No.: 1

Licensee: Foundation Engineering Science  
Site of Incident: Norfolk, Va.  
Date of Incident: 10/18/04  
Investigation Date: 10/25/04

License No.: 45-25374-01  
Incident ID No.: NMED 040753  
Type of Incident: Stolen licensed material  
Type of Investigation: Phone

File No.: 2

Licensee: Sentara Southside Hospitals  
Site of Incident: Norfolk, Va.  
Date of Incident: 4/6/04  
Investigation Date: 4/21/04

License No.: 45-00131-02  
Incident ID No.: NMED 040411  
Type of Incident: Equipment failure  
Type of Investigation: Special inspection

File No.: 3

Licensee: Pennsylvania State University  
Site of Incident: University Park, Pa.  
Date of Incident: 9/18/03  
Investigation Date: 11/4/03

License No.: 37-00185-04  
Incident ID No.: NMED 040086  
Type of Incident: Equipment failure  
Type of Investigation: Routine inspection

File No.: 4

Licensee: Exelon Power Laboratory  
Site of Incident: Coatesville, Pa.  
Date of Incident: 10/16/03  
Investigation Date: 10/17/03

License No.: 37-30768-01  
Incident ID No.: NMED 030832  
Type of Incident: Equipment failure  
Type of Investigation: Special inspection

File No.: 5

Licensee: Washington Hospital Center  
Site of Incident: Washington, DC  
Date of Incident: 5/6/03  
Investigation Date: 5/19/03

License No.: 08-03604-03  
Incident ID No.: NMED 030385  
Type of Incident: Equipment defect, medical event  
Type of Investigation: Special inspection

Comment:

- a) One document submitted by the licensee, placed in the license file, contained the patients name and treatment. However, the ADAMS file had the patient's name redacted, and the document not publically available.

File No.: 6

Licensee: Tenet Health System Graduate, LLC  
Site of Incident: Philadelphia, Pa.  
Date of Incident: 10/22/02  
Investigation Date: 11/07/02

License No.: 37-28359-01  
Incident ID No.: NMED 020963  
Type of Incident: Leaking source  
Type of Investigation: Phone

File No.: 7

Licensee: University of Pennsylvania  
Site of Incident: Philadelphia, Pa.  
Date of Incident: 6/20/02  
Investigation Date: 6/27/02

License No.: 37-00118-11  
Incident ID No.: NMED 020872  
Type of Incident: Equipment failure  
Type of Investigation: Phone

File No.: 8

Licensee: George Washington University Medical Center  
Site of Incident: Washington, DC  
Date of Incident: 5/9/02  
Investigation Date: 5/13/02

License No.: 08-30607-01  
Incident ID No.: NMED 020503  
Type of Incident: Equipment failure  
Type of Investigation: Reactive inspection

File No.: 9

Licensee: Tenet Health System Graduate, LLC  
Site of Incident: Philadelphia, Pa.  
Date of Incident: 2/5/02  
Investigation Date: 2/11/02

License No.: 37-28359-01  
Incident ID No.: NMED 20232  
Type of Incident: Leaking source  
Type of Investigation: Phone, verified on  
next routine inspection

File No.: 10

Licensee: Mallinckrodt Medical, Inc  
Site of Incident: Bethlehem, Pa.  
Date of Incident: 12/7/01  
Investigation Date: 11/23/03

License No.: 24-04206-17MD  
Incident ID No.: NMED 20213  
Type of Incident: Radioactive material release  
Type of Investigation: Routine inspection



## APPENDIX F

### DECOMMISSIONING CASEWORK REVIEWS

#### CASEWORK REVIEWS FOR COMPLEX SITES

File No.: 1

Licensee: Viacom, Inc.

Location: Pittsburgh, PA

License No.: SMB-1527

License Type: Manufacturing and Distribution

File No.: 2

Licensee: Dominion Nuclear Connecticut, Inc.

Location: Waterford, CT

License No.: DPR-0065

License Type: Decommissioning Power Reactor

File No.: 3

Licensee: West Valley Demonstration Project

Location: West Valley, NY

License No.: P00M-032

License Type: High-Level Waste Solidification

#### FINANCIAL ASSURANCE INSTRUMENT FILES REVIEWED

File No.: 1

Licensee: Sterigenics East Corporation

Location: Rockaway, NJ

License No.: 29-30308-01

License Type: Irradiator

File No.: 2

Licensee: Wyeth-Ayerst

Location: Collegeville, PA

License No.: 37-00401-03

License Type: Research and Development (Type B Broadscope)

File No.: 3

Licensee: University of Pennsylvania

Location: Philadelphia, PA

License No.: 37-00118-07

License Type: Medical Institution Broadscope

File No.: 4  
Licensee: Becton Dickinson Caribe. Ltd.  
Location: Cayey, Puerto Rico  
License No.: 52-21502-01  
License Type: Manufacturer

File No.: 5  
Licensee: AstraZeneca Pharmaceuticals, L.P.  
Location: Wilmington, DE  
License No.: 07-03990-01  
License Type: Research and Development (Type A Broadscope)