

November 28, 2007

David R. Gifford, M.D.  
Director  
Department of Health  
3 Capitol Hill, Room 206  
Providence, RI 02908

Dear Dr. Gifford:

The U.S. Nuclear Regulatory Commission (NRC) uses the Integrated Materials Performance Evaluation Program (IMPEP) in the evaluation of Agreement State programs. Enclosed for your review is the draft IMPEP report, which documents the results of the Agreement State review held in Rhode Island on October 22-25, 2007. I was the team leader for the review. The review team's preliminary findings were discussed with you and your staff on the last day of the review. The review team's proposed recommendations are that the Rhode Island Agreement State Program be found adequate to protect public health and safety and compatible with NRC's program.

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

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

The team will review your response, make any necessary changes to the report, and issue it to the MRB as a proposed final report. Our preliminary scheduling places the Rhode Island MRB meeting during the week of January 7, 2008. I will coordinate with you to establish the date for the MRB review of the Rhode Island report. The NRC will provide invitational travel for you or your designee to attend the MRB meeting.

The NRC has video conferencing capability if it is more convenient for the State to participate through this medium. Please contact me if you desire to establish a video conference for the meeting.

D. R. Gifford

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November 28, 2007

If you have any questions regarding the enclosed report, please contact me at (301) 415-2309.  
Thank you for your cooperation.

Sincerely,

*/RA/*

Andrea R. Jones, Health Physicist  
Division of Intergovernmental Liaison  
and Rulemaking  
Office of Federal and State Materials  
and Environmental Management Programs

Enclosure:  
Draft Rhode Island IMPEP Report

cc w/encl: Jack Ferruolo, Supervisor  
Rhode Island Radioactive Materials  
& X-Ray Programs

D. R. Gifford

November 28, 2007

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM  
REVIEW OF THE RHODE ISLAND AGREEMENT STATE PROGRAM

October 22-25, 2007

**DRAFT REPORT**

**ENCLOSURE**

## 1.0 INTRODUCTION

This report presents the results of the review of the Rhode Island Agreement State Program. The review was conducted during the period of October 22-25, 2007, by a review team comprised of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the State of California. Team members are identified in Appendix A. The review was conducted in accordance with the "Implementation of the Integrated Materials Performance Evaluation Program and Rescission of Final General Statement of Policy," published in the *Federal Register* on October 16, 1997, and the February 26, 2004, NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period of November 22, 2002, to October 25, 2007, were discussed with Rhode Island's Department of Health managers on the last day of the review.

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

The Rhode Island Agreement State program is administered by the Radiation Control Program (the Program), within the Division of Environmental Health (the Division). The Division is part of the Office of Health Services Regulation and Environmental Health (the Office), within the Department of Health (the Department). The Director of Health, who heads the Department, is appointed by and reports directly to the Governor. Organization charts for the Department and the Division are included as Appendix B.

At the time of the IMPEP review, the Rhode Island Agreement State Program regulated approximately 61 specific licenses authorizing Agreement materials. The review focused on the radioactive materials program as it is carried out under the Section 274b. (of the Atomic Energy Act of 1954, as amended) Agreement between the NRC and the State of Rhode Island and Providence Plantations.

In preparation for the review, a questionnaire addressing the common and applicable non-common performance indicators was sent to the Program on August 3, 2007. The Program provided its response to the questionnaire on September 20, 2007. A copy of the questionnaire response can be found in the NRC's Agencywide Documents Access and Management System (ADAMS) using the Accession Number ML073180728.

The review team's general approach for conduct of this review consisted of: (1) examination of the Program's response to the questionnaire; (2) review of applicable Rhode Island statutes and regulations; (3) analysis of quantitative information from the Program's database; (4) technical review of selected regulatory actions; (5) one field accompaniment of one Rhode Island inspector; and (6) interviews with staff and managers to answer questions or clarify issues. The review team evaluated the information gathered against the established criteria for each common and applicable non-common performance indicator and made a preliminary assessment of the Agreement State program's performance. The review team also evaluated the State's budgetary and associated staffing issues surrounding the Rhode Island proposed return of its Agreement State program in its entirety. Specifically, by letter dated April 1, 2007, Governor Donald Carcieri of Rhode Island advised the NRC of Rhode Island's proposed decision to return the Section 274b. Agreement to the NRC. On July 19, 2007, after the State legislation vetoed the Governor's proposal, Rhode Island informed the NRC that they would

retain their Agreement State program. Section 3.1 contains more information on the budget and staffing issues surrounding Rhode Island's proposed return of its Agreement State program.

Section 2.0 of this report covers the State's actions in response to recommendations made during the previous review. Results of the current review for the common performance indicators are presented in Section 3.0. Section 4.0 details the results of the review of the applicable non-common performance indicators, and Section 5.0 summarizes the review team's findings and recommendations. Recommendations made by the review team are comments that relate directly to program performance by the State. A response is requested from the State to all recommendations in the final report.

## 2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

During the previous IMPEP review, which concluded on November 18, 2002, five recommendations were made and the results were transmitted to Patricia A. Nolan, M.D., former Director of Rhode Island's Department of Health on March 2, 2004. The review team's evaluation of the current status of the recommendations is as follows:

1. The review team recommends that the Office use a fully documented interim qualification program for inspectors. (Section 3.1)

Current Status: During the on-site portion of the review, the review team verified that the Program has implemented and documented a qualification program for inspectors. This recommendation is closed.

2. The review team recommends that the Office implement the action plan and perform inspections of core licenses at their appropriate frequencies. (Section 3.2)

Current Status: Since the 2003 IMPEP followup review, the Program Supervisor tracked the status of their inspection program by using a tracking spreadsheet. The review team used the data from the tracking spreadsheet in its evaluation of the status of this recommendation. The tracking sheets indicated for the years 2004-2007, the Program generally inspected core licensees (initial inspection and routine inspections of Priority 1, 2 and 3) at intervals that exceeded the frequencies prescribed for similar license types in Inspection Manual Chapter (IMC) 2800, "Materials Inspection Programs." This recommendation remains open.

3. The review team recommends that the Office inspect core licensees granted reciprocity in accordance with the criteria in IMC 1220. (Section 3.2)

Current Status: Since the 2003 IMPEP followup review, the Program has consistently inspected candidate licensees granted reciprocity in excess of the goals prescribed in IMC 1220, "Processing of NRC Form 241 and Inspection of Agreement State Licensees Operating Under 10 CFR 150.20." This recommendation is closed.

4. The review team recommends that the State adopt overdue regulations required for compatibility. (Section 4.1.2)

Current Status: Since the 2003 IMPEP followup review, the Program has consistently adopted regulations required for compatibility in a timely manner. This recommendation is closed.

5. The review team recommends that the Office train and qualify a sufficient number of reviewers to conduct and sign safety evaluations of SS&D applications in accordance with NRC/OAS Training Working Group Recommendations. (Section 4.2.2)

Current Status: Rhode Island returned its authority for a Sealed Source and Device (SS&D) Evaluation Program to the NRC in July 2006. This recommendation is no longer applicable to the Rhode Island Agreement State Program; therefore, this recommendation is closed.

### 3.0 COMMON PERFORMANCE INDICATORS

IMPEP identifies five common performance indicators to be used in reviewing NRC Regional and Agreement State radioactive materials programs. These indicators are: (1) Technical Staffing and Training, (2) Status of Materials Inspection Program, (3) Technical Quality of Inspections, (4) Technical Quality of Licensing Actions, and (5) Technical Quality of Incident and Allegation Activities.

#### 3.1 Technical Staffing and Training

Issues central to the evaluation of this indicator include the Program's staffing level and staff turnover, as well as the technical qualifications and training histories of the staff. To evaluate these issues, the review team examined the Program's questionnaire response relative to this indicator; interviewed managers and staff; and reviewed job descriptions, training plans, and training records. The review team also considered any possible workload backlogs in evaluating this indicator.

The Program consists of five technical staff positions and a supervising radiological health specialist (the Supervisor). The Program's responsibilities include mammography, X-ray, radioactive materials and emergency preparedness/response. One staff member is dedicated to X-ray and mammography, one to the radioactive materials program, and the remaining three staff members, along with the Supervisor, provide partial support to the radioactive materials program. One of the supporting staff positions has been vacant since May 2007. Efforts to fill the vacancy are still ongoing. Based on discussions and information provided in response to the questionnaire, 1.75 full-time equivalents are allocated to the radioactive materials program, including the contribution from the vacant position. With a total of 61 licenses, the level of staffing appeared adequate to perform the Program's licensing and inspections and did not present any performance issues affecting implementation of the Agreement State program.

Since the last IMPEP review, Rhode Island considered returning its Agreement State program to the NRC. Due to budget issues in October 2006, the State placed the Program under review for possible return to the NRC. The Rhode Island Fiscal Year 2008 Budget Act, which became effective July 1, 2007, created a restricted receipts account for deposit of the Program's

licensing fees. The creation of a dedicated fund for the Program allows the radioactive materials program to be financially self-sufficient, recovering associated costs through licensing fees.

The review team determined the qualifications of Program staff from the Program's response to the questionnaire, training records, and discussions with staff. Staff training and qualifications are maintained in a training matrix that documents staff training history and personnel file memoranda. The personnel file memoranda, which are generated on an annual basis, identify the inspection categories for which a staff member is qualified. The training matrix is used to monitor the status of core, supplemental, and other training. The qualified staff attended the core training courses as prescribed by IMC 1246, Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area." Staff members that had not completed the core training courses but had established competency in some inspection categories were given interim qualification and were permitted to perform inspections for those categories. Staff was familiar with Rhode Island regulations, procedures, and policies. At the time of the review, the Program had two staff members that had attended the NRC Security Systems and Principles Course to qualify them for Increased Controls inspections. Managers were supportive of staff training within the budget constraints of the Program.

Rhode Island statute Title 23, Chapter 23, Section 23-1.3-13 provided for the creation of an 11-member State Radiation Advisory Commission (the Commission), whose members have expertise in radiation protection and radiation health. The Commission provides advice on radiation protection issues and regulations to the Program and meets on an as needed basis. The review team identified no potential conflicts of interest.

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

### 3.2 Status of Materials Inspection Program

The review team focused on five factors in reviewing this indicator: inspection frequency, overdue inspections, initial inspections of new licenses, timely dispatch of inspection findings to licensees, and performance of reciprocity inspections. The review team's evaluation was based on the Program's questionnaire response relative to this indicator, the data gathered from the Program's inspection data tracking system, the examination of completed inspection casework, and the interviews with managers and staff.

The review team verified that the Program's inspection frequencies for various license types were at least as frequent as similar license types listed in IMC 2800.

In analyzing the Program's inspection tracking data, the review team observed that routine inspections of Priority 1, 2, and 3 licenses and initial inspections of new licenses were often being conducted at frequencies exceeding those prescribed in IMC 2800. The 2002 IMPEP review team identified previous issues in the Program with the timeliness of inspections, which led to the State being put on Heightened Oversight. During that review period, the Program failed to perform routine inspections for a period of 22 months. The 2003 followup IMPEP review team found that the Program had scheduled all routine Priority 1, 2, and 3 inspections and initial inspections at the appropriate frequency, and the State was taken off of Heightened Oversight. Based on the evaluation of current inspection tracking data, the review team determined that 19 out of 56 Priority 1, 2, and 3 initial inspections were completed overdue during the review period.

The review team attributed the root cause of the overdue inspections to the Program's performance of the 2000-2003 back-log inspections, wherein overdue inspections are carried over to the next year; maternity leave of inspection staff; competing training requirements in other program areas; and the loss of the previous Supervisor within this review period. Additionally, the prospect of elimination of the program, proposed in October 2006, may have also had an interruption on completing inspections due to considerations concerning lost of staff. The review team recommends that the State take appropriate measures to conduct core inspections (including initial inspections) in accordance with the inspection priority schedule in MC 2800.

The review team sampled a cross-section of inspections reports to supplement its analysis of the Program's timeliness of inspections. The review team determined that all but one inspection, an inspection of a Priority 5 licensee, was performed in a timely manner. Through the evaluation of casework, the review also determined that inspection findings were consistently communicated to licensees less than 30 days after the respective inspection.

To further evaluate Rhode Island's performance under this indicator, the review team evaluated the Program's efforts in reducing its inspection backlog. The review team noted the Program's continued success in reducing its backlog since the November 2003 followup IMPEP review. The review team determined that in 2004, the Program had 11 overdue Priority 1, 2, and 3 and initial inspections. During the review period, the Program reduced its backlog to 6 overdue inspections at the time of the review.

Reciprocity was granted to 14 licensees in 2003; 15 licensees in 2004; 18 licensees in 2005; 22 licensees in 2006; and 21 licensees to date in 2007. During the review period, the Program performed 20 reciprocity inspections. The review team determined that the Program met or exceeded the goal of inspecting 20 percent of all candidate licensees operating under reciprocity, as established by IMC 1220, during the review period.

The review team determined that the Program adequately planned for the initial set of Increased Controls inspections of affected licensees. The review team evaluated the Program's prioritization methodology and found it acceptable. At the time of the review, the Program had 16 licensees subject to the Increased Controls. The Program had completed all initial Increased Controls inspections of the 16 affected licensees prior to the review.

Based on the IMPEP evaluation and considering the Program's efforts to reduce its inspection backlog, improve its performance of reciprocity inspections, and perform its Increased Controls inspections in a timely manner, the review team recommends that Rhode Island's performance with respect to the indicator, Status of Materials Inspection Program, be found satisfactory, but needs improvement.

### 3.3 Technical Quality of Inspections

The review team evaluated inspection reports, enforcement documentation, inspection field notes, and interviewed inspectors for 13 radioactive materials inspections conducted during the review period. The casework examined included a cross-section of inspections conducted by two Program inspectors and the Supervisor and covered a variety of license types, including:

gamma knife, medical private practice, high dose-rate remote afterloader (HDR), teletherapy, industrial radiography, and manufacturing and distribution. Appendix C lists the inspection casework files reviewed, as well as the results of the inspector accompaniments.

Based on the evaluation of casework, the review team noted that inspections covered all aspects of 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 licensees' performances with respect to health, safety, and security were acceptable. The documentation supported violations and 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.

For the casework reviewed, inspection findings were appropriate and prompt regulatory actions were taken, as appropriate. The Program issues timely compliance letters to licensees explaining inspection findings and violations. The Supervisor stated that escalated enforcement action was limited to the issuance of orders, as monetary penalties are not authorized.

The inspection procedures utilized by the Program are consistent with the inspection guidance found in IMC 2800. Findings were clearly stated and documented. All inspection reports and correspondence are reviewed by the Supervisor prior to issuance. The review team noted that inspection correspondence involving the Increased Controls was appropriately labeled as sensitive information and withheld from public disclosure.

The review team noted that supervisor accompaniments of the inspection staff were completed and consistently performed over the review period.

The review team confirmed that the Rhode Island program maintains an adequate supply of portable radiation detection instruments for use during routine inspections and response to incidents. Instrument calibrations are performed annually by the University of Rhode Island's Nuclear Science Center using sources that are traceable to the National Institute of Standards and Technology. The State also utilized the Nuclear Science Center for analysis of wipes and environmental samples taken during inspections.

On October 16-17, 2007, a review team member accompanied one of the Program's inspectors on a routine health and safety inspection of a medical facility. The accompaniment is identified in Appendix C. During the accompaniment, the inspector demonstrated appropriate inspection techniques and knowledge of the regulations. The inspector was trained, prepared, and thorough in his audit of the licensee's radiation safety program. The inspector utilized good health physics practices and interviewed licensee personnel in an effective manner. The inspection was adequate to assess radiological health and safety at the licensed facility.

Based on the IMPEP evaluation criteria, the review team recommends that Rhode Island'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 and discussed 14 licensing actions related to 12 specific licenses. Licensing actions were reviewed

for completeness, consistency, proper radioisotopes and quantities, qualifications of authorized users, adequate facilities and equipment, adherence to good health physics practices, operating and emergency procedures, appropriateness of the license conditions, Increased Controls, and overall technical quality. The casework was also reviewed for timeliness, use of appropriate deficiency letters and cover letters, reference to appropriate regulations, supporting documentation, consideration of enforcement history, pre-licensing visits, peer/supervisory review, and proper signatures. The casework was checked for retention of necessary documents and supporting data.

The licensing casework was selected to provide a representative sample of licensing actions completed during the review period. Licensing actions selected for evaluation included 2 new licenses, 1 renewal, 8 amendments, and 3 terminations. The sampling included the following license types: industrial radiography; broadscope medical; veterinary non-human; stereostatic radiosurgery; broadscope academic; broadscope manufacturing and distribution; teletherapy; portable and fixed gauges; medical private practice; and research and development. A listing of the licensing casework evaluated can be found in Appendix D.

The review team found that the licensing actions were thorough, complete, consistent, and of high quality, with health, safety, and security issues properly addressed. License tie-down conditions were stated clearly, backed by information contained in the file, and auditable. Licensees' compliance histories were taken into account when reviewing all renewal applications and major amendments.

Each licensing action is given a technical review by a license evaluator. The Radioactive Materials Licensing Manager performs the majority of the licensing actions and additionally performs a technical and supervisory review on licensing actions performed by other reviewers before issuance. Effective August 2006, the Program extended its license expiration dates from a 5-year period to a 10-year period in an effort to reduce the licensing backlog. The Program currently has 59 specific licensees. Since the last review, there are 16 over due renewals (a 27 percent backlog). The review team felt that the backlog was significant based on the number of Rhode Island licensees. All overdue licenses are under timely renewal and will remain in timely renewal until such time as a technical review can be performed. At the time of the review, the Program had 16 licenses with overdue renewals in timely renewal status. Although the expiration periods ranged from the year 2000 through 2006, the review team identified no apparent impact on public health and safety due to either ongoing and/or relatively recent licensing actions (amendments).

The review team observed a thorough and complete documentation of the termination process, to include an on-site inspection and observance of material transfer. The review team found that terminated licensing actions were well-documented, showing appropriate material transfer and survey records. The review team noted that confirmatory surveys were conducted, when appropriate.

The review team observed the Program's implementation of the pre-licensing guidance in the issuance of two new licenses. Although the Program appeared to have implemented the pre-licensing guidance, discussions with Program staff and managers revealed that staff was not fully aware that the pre-licensing guidance is also applicable to other licensing actions (renewals and amendments). Additionally, although staff routinely used the appropriate NRC guidance documents for license reviews, the Program has no formal documentation of the radioactive

materials licensing program, and thus, no formal documentation as to how the pre-licensing guidance will be integrated into the radioactive materials licensing program.

The review team examined the list of licensees that the Program determined to meet the criteria for the Increased Controls, per COMSECY-05-0028, "Staff Response to Staff Requirements Memorandum for COMSECY-05-0015: Initiatives for Increasing Agreement State Participation in the Control of Sources," dated July 25, 2005. The review team determined that the Program had correctly identified the licensees that require the Increased Controls based on this criterion. Each licensee was issued a license amendment, requiring the Increased Controls, in accordance with the time lines established by the NRC in the Staff Requirements Memorandum for COMSECY-05-0028. Although the Program appeared to have identified all licensees that meet the criteria for Increased Controls, at the time of the review, the Program had not documented the process used to determine which licensees meet the criteria for the Increased Controls, and thus, determination for future licensees and/or licensing actions.

The review team noted the depth of experience of the current staff, but had concerns with the Program's ability to transfer historical knowledge and maintain program consistency without a fully-documented radioactive materials licensing program to include the Increased Controls criteria and the pre-licensing guidance. The review team recommends that the State develop a written documentation of its radioactive materials licensing program to ensure that a memorialized program exists to train and transfer knowledge to future, as well as current, staff.

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

### 3.5 Technical Quality of Incident and Allegation Activities

To evaluate the effectiveness of the Program's actions in responding to incidents and allegations, the review team examined the Program's response to the questionnaire relative to this indicator, evaluated selected incidents reported for Rhode Island in the Nuclear Material Events Database (NMED) against those contained in the Program's files, and evaluated the casework for six radioactive materials incidents. A listing of the casework examined can be found in Appendix E.

The incidents selected for review included medical events, lost/stolen radioactive material, and overexposure. Upon receipt, the Supervisor reviews the report, decides on the appropriate response, assigns the report a specific identification number, and then logs it into the Program's incident tracking system. Written documentation related to each incident is placed in an incident file. The review team determined that the Program's response to incidents was complete and comprehensive. Initial responses were prompt and well coordinated, and the level of effort was commensurate with the health and safety significance. The Program dispatched inspectors for on-site investigations in appropriate situations and took suitable enforcement and followup actions when necessary.

The Supervisor provides information electronically to the NRC's contractor responsible for maintaining NMED. The NMED information is updated as needed. The review team found that incident information in NMED provided by the Program was up to date and complete.

During the review period, the Program received four allegations involving radioactive material. All were reported directly to the Program. The review team evaluated the casework for all four allegations. The review team noted that the Program promptly responded to all allegations with appropriate investigations and followup and close-out actions. All of the allegations were appropriately closed, and appropriate parties were notified of the actions taken. The review team identified no performance issues from the review of the allegation casework.

The Program has complete written guidance for handling incidents and allegations in their inspection procedures. The review team noted that Rhode Island law requires that public documents be made available upon request. The State makes every effort to protect an alleged's identity, but it cannot be guaranteed.

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

#### 4.0 NON-COMMON PERFORMANCE INDICATORS

IMPEP identifies four non-common performance indicators to be used in reviewing Agreement State Programs: (1) Compatibility Requirements; (2) Sealed Source and Device Evaluation Program; (3) Low-Level Radioactive Waste Disposal Program; and (4) Uranium Recovery Program. Only the non-common performance indicator, Compatibility Requirements, was applicable to this review.

##### 4.1 Legislation and Program Elements Required for Compatibility

###### 4.1.1 Legislation

Rhode Island became an Agreement State on January 1, 1980. The currently effective statutory authority for the Program is contained in the State of Rhode Island and Providence Plantations Department of Health Rules and Regulations for the Control of Radiation, Title 23, Chapter 1.3. In addition to their response to the questionnaire, the State provided the review team with the opportunity to review copies of legislation that affect the radiation control program. The review team noted that no legislation affecting the Program was passed during the review period. Rhode Island Regulations are subject to RIGL-42-35-4.1, requiring all regulations promulgated by State agencies to be refiled every 5 years to remain effective. The radiation control regulations were last filed in January 2007.

###### 4.1.2 Program Elements Required for Compatibility

The Rhode Island Rules and Regulations for the Control of Radiation (R23-1.3-RAD) apply to all sources of ionizing radiation. Rhode Island requires a license for possession and use of all radioactive material including naturally occurring materials, such as radium, and accelerator-produced radionuclides. Rhode Island also requires registration of all equipment designed to produce x-rays or other ionizing radiation, as well as non-ionizing radiation from tanning equipment.

The review team examined the State's administrative rulemaking process and found that the process takes approximately 4 to 6 months after the Program prepares a proposed regulation

and submits it to the NRC. After the NRC completes its review and recommends adoption, the Department's legal counsel reviews the proposed regulations. The proposed regulation is sent to the public, the NRC, other agencies, and all potentially impacted licensees and registrants for comment. The Director of Health gives final approval and signs the final regulations. The regulations are then filed with the Secretary of State and become effective 21 days later. The State can adopt other agency regulations by reference and has the authority to issue legally-binding requirements (e.g., license conditions) in lieu of regulations until compatible regulations become effective.

The review team evaluated the Program's response to the questionnaire, reviewed the status of regulations required to be adopted by the State under the NRC's adequacy and compatibility policy, and verified the adoption of regulations with data obtained from the NRC's Office of Federal and State Materials and Environmental Management Programs' State Regulation Status Sheet.

Current NRC policy requires that Agreement States adopt certain equivalent regulations or legally-binding requirements no later than 3 years after they become effective. The review team identified the following amendment as overdue at the time of the review:

- "Compatibility with IAEA Transportation Safety Standards (TS-R-1) and Other Transportation Safety Amendments," 10 CFR Part 71 amendment (69 FR 3697, 58038), that became effective October 1, 2004, and was due for Agreement State adoption by October 1, 2007.

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

#### 4.2 Low-Level Radioactive Waste (LLRW) Disposal Program

In 1981, the NRC amended its Policy Statement "Criteria for Guidance of States and NRC in Discontinuance of NRC Regulatory Authority and Assumption Thereof by States Through Agreement" to allow a State to seek an amendment for the regulation of LLRW as a separate category. Those States with Agreements prior to 1981 were determined to have continued LLRW disposal authority without the need of an amendment. Although the Rhode Island Agreement State Program has LLRW disposal authority, NRC has not required States to have a program for licensing a LLRW disposal facility until such time as the State has been designated as a host State for a LLRW disposal facility. When an Agreement State has been notified or becomes aware of the need to regulate a LLRW disposal facility, they are expected to put in place a regulatory program that will meet the criteria for an adequate and compatible LLRW disposal program. There are no plans for a LLRW disposal facility in Rhode Island. Accordingly, the review team did not review this indicator.

#### 5.0 SUMMARY

As noted in Sections 3.0 and 4.0, the review team found Rhode Island's performance to be satisfactory, but needs improvement, for the performance indicator, Status of Materials Inspection Program, and satisfactory for all other performance indicators reviewed. Accordingly, the review team recommends that the Rhode Island Agreement State Program be found adequate to protect public health and safety and compatible with NRC's program. Based on the

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

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

1. The review team recommends that the State take appropriate measures to conduct core inspections (including initial inspections) in accordance with the inspection priority schedule in MC 2800. (Section 3.2)
2. The review team recommends that the State develop a written documentation of its radioactive materials licensing program to ensure that a memorialized program exists to train and transfer knowledge to future, as well as current, staff. (Section 3.4)

## LIST OF APPENDIXES

Appendix A	IMPEP Review Team Members
Appendix B	Rhode Island Organization Charts
Appendix C	Inspection Casework Reviews
Appendix D	License Casework Reviews
Appendix E	Incident Casework Reviews

APPENDIX A

IMPEP REVIEW TEAM MEMBERS

<b>Name</b>	<b>Area of Responsibility</b>
Andrea Jones, FSME	Team Leader Status of Materials Inspection Program Technical Quality of Inspections Technical Quality of Incident and Allegation Activities
James Kottan, Region I	Technical Staffing and Training
Frieda Taylor, California	Technical Quality of Licensing Actions
Monica Orendi, FSME	Compatibility Requirements
Donna Janda, Region I	Inspector Accompaniment

APPENDIX B

RHODE ISLAND ORGANIZATION CHART

ADAMS ACCESSION NO.: ML073190195

PAGES 1-3

## APPENDIX C

### INSPECTION CASEWORK REVIEWS

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

File No.: 1 Licensee: Rhode Island Hospital Inspection Type: Routine, Unannounced Inspection Date: 9/4/07	License No.: 7D-051-02 Priority: 3 Inspector: DK
File No.: 2 Licensee: Paul D. Aldinger Inspection Type: Routine, Unannounced Inspection Date: 3/31/04	License No.: 3L-107-01 Priority: 5 Inspector: CW
File No.: 3 Licensee: Kent County Hospital Inspection Type: Routine, Unannounced Inspection Date: 6/27/03	License No.: 7B-020-01 Priority: 3 Inspector: JF
File No.: 4 Licensee: GZA Geotechnical Inc. Inspection Type: Routine, Unannounced Inspection Date: 9/15/05	License No.: 3L-079-01 Priority: 5 Inspector: CW
File No.: 5 Licensee: Jaworski Geotech Inspection Type: Routine, Unannounced Inspection Date: 9/11/02	License No.: 3L-119-01 Priority: 5 Inspector: DK
File No.: 6 Licensee: Cardiology Specialist Inspection Type: Initial, Unannounced Inspection Date: 12/27/05	License No.: 7B-134-01 Priority: 5 Inspector: DW
File No.: 7 Licensee: Digirad Inspection Type: Initial, Announced Inspection Date: 9/6/05	License No.: 7B-133-01 Priority: 5 Inspector: JF
File No.: 8 Licensee: Envirosience Consultants, Inc. Inspection Type: Initial, Unannounced Inspection Date: 4/30/04	License No.: 3L-118-01 Priority: 5 Inspector: CW

File No.: 9

Licensee: Gelsser Engineering  
Inspection Type: Routine, Unannounced  
Inspection Date: 6/13/05

License No.: 3L-050-01  
Priority: 5  
Inspector: CW

File No.: 10

Licensee: South County Cardiology Associates  
Inspection Type: Initial, Unannounced  
Inspection Date: 6/24/04

License No.: 7B-129-01  
Priority: 3  
Inspector: DK

File No.: 11

Licensee: Cardinal Health  
Inspection Type: Routine, Unannounced  
Inspection Date: 10/7/02

License No.: 3B-114-01  
Priority: 1  
Inspector: DK

File No.: 12

Licensee: Niton Corporation  
Inspection Type: Routine, Unannounced  
Inspection Date: 12/4/03

License No.: 3G-105-02  
Priority: 5  
Inspector: DK

File No.: 13

Licensee: Brown University  
Inspection Type: Routine/Special, Unannounced  
Inspection Date: 10/27/03

License No.: 3K-036-01  
Priority: 3  
Inspector: DK

#### INSPECTOR ACCOMPANIMENT

The following inspector accompaniment was performed prior to the on-site IMPEP review:

Licensee: Rhode Island Hospital  
Inspection Type: Routine, Unannounced  
Inspection Dates: 10/16-17/07

License No.: 7D-051-01  
Priority: 2  
Inspector: DK

## APPENDIX D

### LICENSE CASEWORK REVIEWS

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

File No.: 1

Licensee: ANVIL International, Inc.

Type of Action: Termination

Date Issued: 11/3/06

License No.: 3D-064-01

Amendment No.: 15

License Reviewer: JF

File No.: 2

Licensee: ANVIL International, Inc.

Type of Action: Amendment

Date Issued: 10/14/05

License No.: 3D-064-01

Amendment No.: 13

License Reviewer: JF

File No.: 3

Licensee: Rhode Island Hospital

Type of Action: Amendment

Date Issued: 10/14/05

License No.: 7D-051-01

Amendment No.: 31

License Reviewer: JF

File No.: 4

Licensee: Ocean State Veterinary Specialists

Type of Action: Renewal

Date Issued: 4/17/07

License No.: 3K-126-01

Amendment No.: 1

License Reviewer: CW

File No.: 5

Licensee: Rhode Island Hospital

Type of Action: Amendment

Date Issued: 10/24/05

License No.: 7A-051-02

Amendment No.: 21

License Reviewer: JF

File No.: 6

Licensee: Brown University

Type of Action: Amendment

Date Issued: 10/14/05

License No.: 3K-036-01

Amendment No.: 30

License Reviewer: JF

File No.: 7

Licensee: Thermo Niton Analyzers LLC

Type of Action: Amendment

Date Issued: 1/19/06

License No.: 3A-105-01

Amendment No.: 15

License Reviewers: DK, WD

File No.: 8

Licensee: Rhode Island Hospital

Type of Action: Amendment

Date Issued: 6/8/07

License No.: 7D-051-01

Amendment No.: 37

License Reviewer: JF

File No.: 9

Licensee: Radiation Oncology Services of Rhode Island

Type of Action: Termination

Date Issued: 5/21/07

License No.: 7A-053-01

Amendment No.: 15

License Reviewer: JF

File No.: 10

Licensee: Northeast Engineers & Consultants, Inc.

Type of Action: Amendment

Date Issued: 2/3/05

License No.: 3L-115-01

Amendment No.: 4

License Reviewer: JF

File No.: 11

Licensee: Rhode Island Cardiovascular Group, Inc.

Type of Action: New

Date Issued: 2/2/07

License No.: 7B-137-01

Amendment No.: N/A

License Reviewer: JF

File No.: 12

Licensee: Rhode Island Psychiatric Research Center

Type of Action: Termination

Date Issued: 10/30/03

License No.: 3K-023-01

Amendment No.: 10

License Reviewer: JF

File No.: 13

Licensee: VeroScience, LLC

Type of Action: New

Date Issued: 4/27/07

License No.: 3K-136-01

Amendment No.: 1

License Reviewer: JF

File No.: 14

Licensee: Electric Boat Corporation

Type of Action: Amendment

Date Issued: 12/4/06

License No.: 3D-005-01

Amendment No.: 17

License Reviewer: JF

## APPENDIX E

### INCIDENT CASEWORK REVIEWS

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

File No.: 1

Licensee: Rhode Island Hospital  
(Miriam Campus)

Date of Incident: 2/16/05

Investigation Date: 4/11/05

No.: 7D-051-01

NMED No.: 050195

Type of Incident: Lost/stolen RAM

Type of Investigation: Telephone

File No.: 2

Licensee: Rhode Island Hospital

Date of Incident: 5/9/07

Investigation Date: 5/25/07

License No.: 7A-051-02

NMED No.: 050529

Type of Incident: Medical Event

Type of Investigation: Site

File No.: 3

Licensee: Cardinal Health

Date of Incident: 3/8/07

Investigation Date: 3/9/07

License No.: 3B-114-01

NMED No.: 050139

Type of Incident: Lost/stolen RAM

Type of Investigation: Telephone

File No.: 4

Licensee: Rhode Island Hospital

Date of Incident: 5/9/07

Investigation Dates: 5/25/07

License No.: 7A-051-02

NMED No.: 070309

Type of Incident: Medical Event

Type of Investigation: Telephone

File No.: 5

Licensee: Rhode Island Hospital

Date of Incident: 7/18/05

Investigation Date: 8/19/05

License No.: 7A-051-02

NMED No.: 050529

Type of Incident: Medical Event

Type of Investigation: Telephone

File No.: 6

Licensee: Anvil International

Date of Incident: 3/3/06

Investigation Dates: 3/3/06, 3/8/06, 3/16/06

License No.: 3D-064-01

NMED No.: 060163

Type of Incident: Overexposure

Type of Investigation: Site