

May 25, 2012

MEMORANDUM TO: Michael F. Weber  
Deputy Executive Director for Materials, Waste,  
Research, State, Tribal, and Compliance Programs  
Office of the Executive Director for Operations

Bradley W. Jones, Assistant General Counsel  
for Reactor and Materials Rulemaking  
Office of the General Counsel

Mark A. Satorius Director  
Office of Federal and State Materials  
and Environmental Management Programs

Bill Dean, Regional Administrator  
Region I

FROM: Duncan White, Chief */RA L. Dimmick for/*  
Agreement State Programs Branch  
Division of Materials Safety  
and State Agreements  
Office of Federal and State Materials  
and Environmental Management Programs

SUBJECT: INTEGRATED MATERIALS PERFORMANCE EVALUATION  
PROGRAM (IMPEP) REVIEW OF ARIZONA AGREEMENT STATE  
PROGRAM

This memorandum transmits to the Management Review Board (MRB) a proposed final report (Enclosure 1) documenting the IMPEP review of the Arizona Agreement State Program. The review was conducted by an interoffice team during the period of March 26-30, 2012. The team issued a draft report to Arizona on April 20, 2012 for factual comment. Arizona responded to the findings and conclusions of the review by letter dated May 7, 2012, from Kevin R. Kinsall, Policy Advisor Natural Resources. Arizona noted one report correction which was incorporated into the proposed final report.

The review team is recommending that Arizona's performance be found satisfactory for the indicators Technical Staffing and Training, Status of Materials Inspection Program, Technical Quality of Inspections, Technical Quality of Licensing Actions, and Technical Quality of Incident and Allegation Activities; and satisfactory, but needs improvement, for the performance indicator Compatibility Requirements. Accordingly, the review team is recommending that the Arizona Agreement State Program be found adequate to protect public health and safety and compatible with NRC's program. The review team is recommending that the next IMPEP review take place in approximately 4 years and that a periodic meeting be held in 1 year. Based on the findings, the review team is also recommending that the period of Heightened Oversight of the Arizona Agreement State Program be discontinued.

The Management Review Board meeting to consider the Arizona Agreement State report is scheduled for **Tuesday, June 12, 2012, from 1:00 p.m. to 4:00 p.m. (EDT), in OWFN-17B4.** In accordance with Management Directive 5.6, the meeting is open to the public. The agenda for that meeting is enclosed (Enclosure 2).

If you have any questions prior to the meeting, please contact Lisa Dimmick at (301) 415-0694.

Enclosures:

As stated

cc w/ encl:

Karen Beckley, Nevada  
Organization of Agreement States  
Liaison to the MRB

Aubrey V. Godwin, Director  
AZ Radiation Regulatory Agency

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF THE ARIZONA AGREEMENT STATE PROGRAM

March 26-30, 2012

**PROPOSED FINAL REPORT**

Enclosure

## EXECUTIVE SUMMARY

This report presents the results of the Integrated Materials Performance Evaluation Program (IMPEP) review of the Arizona Agreement State Program. The review was conducted during the period of March 26-30, 2012, by a review team composed of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the Commonwealth of Massachusetts.

Based on the results of this review, the review team recommends that Arizona's performance be found satisfactory for the indicators Technical Staffing and Training, Status of Materials Inspection Program, Technical Quality of Inspections, Technical Quality of Licensing Actions, and Technical Quality of Incident and Allegation Activities; and satisfactory, but needs improvement, for the performance indicator Compatibility Requirements.

The review team closed four open recommendations regarding program performance by the State from previous IMPEP reviews and did not make any new recommendations during this review.

Accordingly, the review team recommends that the Arizona Agreement State Program be found adequate to protect public health and safety and compatible with NRC's program. The review team recommends that the next IMPEP review take place in approximately 4 years and that a periodic meeting be held in 1 year. Based on the findings, the review team also recommends that the period of Heightened Oversight of the Arizona Agreement State Program be discontinued.

## 1.0 INTRODUCTION

This report presents the results of the review of the Arizona Agreement State Program. The review was conducted during the period of March 26-30, 2012, by a review team composed of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the Commonwealth of Massachusetts. Team members are identified in Appendix A. The review was conducted in accordance with the "Implementation of the Integrated Materials Performance Evaluation Program and Rescission of Final General Statement of Policy," published in the *Federal Register* on October 16, 1997, and NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)," dated February 26, 2004. Preliminary results of the review, which covered the period of March 15, 2008, to March 30, 2012, were discussed with Arizona 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 Arizona Agreement State Program is administered by the Arizona Radiation Regulatory Agency (the Agency). The Agency Director reports directly to the Governor. An organization chart for the Agency is included as Appendix B.

At the time of the review, the Arizona Agreement State Program regulated 371 specific licenses authorizing possession and use of radioactive materials. The review focused on the radioactive materials program as it is carried out under the Section 274b. (of the Atomic Energy Act of 1954, as amended) Agreement between NRC and the State of Arizona.

In preparation for the review, a questionnaire addressing the common and applicable non-common performance indicators was sent to the Agency on December 9, 2011. The Agency provided its response to the questionnaire on March 13, 2012. A copy of the questionnaire response can be found in NRC's Agencywide Documents Access and Management System (ADAMS) using the Accession Number ML120890174.

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

Section 2.0 of this report covers the State's actions in response to recommendations made during previous reviews. Results of the current review of the common performance indicators are presented in Section 3.0. Section 4.0 details the results of the review of the applicable non-common performance indicators, and Section 5.0 summarizes the review team's findings.

## 2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

During the 2010 followup IMPEP review, which concluded on April 1, 2010, the review team made four recommendations regarding the Arizona Agreement State Program's performance. The status of each recommendation is as follows:

1. The review team recommends that the State review and update, if appropriate, the Agency's staffing and budget plan to ensure Program needs are met and to maintain long-term stability of the Program. (Section 2.1 of the 2010 followup IMPEP review report)

Status: Since the 2010 followup IMPEP review, the Agency has reviewed and updated its staffing and budget plan annually as part of the State's budget process. The Agency plans to continue this activity for the foreseeable future in accordance with the State's budget process. The review team concluded that the Agency had satisfied the intent of this recommendation by addressing its immediate needs; therefore, this recommendation is closed.

2. The review team recommends that an Agency manager accompany each inspector, at least annually, to ensure quality and consistency in the inspection program. (Section 2.3 of the 2010 followup IMPEP review report)

Status: Following the 2010 IMPEP review, the Agency reduced its interval for inspector accompaniments from 12 months to 6 months. The review team verified that the Agency conducted supervisory accompaniments of all of its inspectors during the review period. The Agency conducted supervisory accompaniments of all of its primary materials inspectors at a six-month frequency. Following the review, the Agency plans to return to a 12-month accompaniment schedule. This recommendation is closed.

3. The review team recommends that the State implement the pre-licensing checklist and guidance for all licensing actions to provide assurance that radioactive material will be used as specified on the license. (Section 2.4 of the 2010 followup IMPEP review report)

Status: Following the 2010 followup IMPEP review, the Agency implemented an older version of the pre-licensing checklist. The review team assessed the Agency's implementation of that pre-licensing checklist and found that, in several cases, the Agency did not correctly document one step of the screening checklist used. The review team recognized this as a common mistake based on the version of the pre-licensing checklist that the Agency used. Discussions with Agency license reviewers revealed that the Agency's intent was correct in filling out the checklist and pre-licensing site visits were performed, as appropriate. Because of the potential for this common mistake, the review team encouraged the Agency to begin using the most recent version of the pre-licensing checklist, which clarified the step where the errors were made. The Agency committed to begin using the revised pre-licensing checklist that was transmitted to the Agreement States via Office of Federal and State Materials and Environmental Management Programs (FSME) Letter RCPD-08-020. The review team concluded that the Agency had satisfied the intent of this recommendation. This recommendation is closed.

4. The review team recommends that the State review its radioactive materials licenses regarding the requirements for financial assurance, and either obtain financial assurance for licenses that are authorized to possess the applicable quantities, or revise the license conditions to ensure clear quantity limits that will not require provision of financial assurance. (Section 2.4 of the 2010 followup IMPEP review report)

Status: The Agency reviewed all of its radioactive materials licenses to ensure that all licensees authorized to possess quantities requiring financial assurance have submitted the appropriate documentation to the Agency. The Agency has imposed quantity limits and license conditions to keep other licensees under the threshold for financial assurance. In its licensing casework review, the review team verified the appropriateness of the documentation or license conditions and did not identify any cases that were not consistent with Arizona's regulations for financial assurance. This recommendation is closed.

### 3.0 COMMON PERFORMANCE INDICATORS

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

#### 3.1 Technical Staffing and Training

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

The Agency is headed by the Agency Director. Within the Agency, the Radioactive Materials Program (the Program) is responsible for radioactive materials inspection, licensing, and compliance activities, as well as, some emergency response activities. The Program is headed by the Program Manager who reports directly to the Agency Director.

At the time of the review, there were eight staff members with various degrees of involvement in the radioactive materials program, totaling approximately 4.5 full-time equivalents. At the time of the review, no positions with involvement in the Program were vacant. As indicated on the organization chart in Appendix B, one technical staff position was vacant; however, this position was not budgeted, and the position cannot be filled. The review team determined that Agency's staffing levels were adequate for the Agency's current workload.

The Agency has a documented training plan for technical staff that is consistent with the requirements in the NRC/Organization of Agreement States Training Working Group Report and NRC's Inspection Manual Chapter (IMC) 1246, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area." Staff members are assigned increasingly complex duties as they progress through the qualification process. The review team concluded that the Agency's training program is adequate to carry out its regulatory duties and noted that Agency management supports training opportunities.



Based on the IMPEP evaluation criteria, the review team recommends that Arizona'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 while reviewing this indicator: inspection frequency, overdue inspections, initial inspections of new licenses, timely dispatch of inspection findings to licensees, and performance of reciprocity inspections. The review team's evaluation was based on the Agency's questionnaire response relative to this indicator, data gathered from the Agency's database, examination of completed inspection casework, and interviews with Agency managers and staff.

The review team verified that the Agency's inspection frequencies for most types of radioactive material licenses are at least as frequent as similar license types listed in IMC 2800, "Materials Inspection Program." Only certain nuclear cardiology and gauge licenses are performed at a more frequent inspection schedule than those identified in IMC 2800.

The Agency conducted 100 higher priority (Priority 1, 2, and 3) inspections during the review period, based on the inspection frequencies established in IMC 2800. Only one of the inspections was conducted overdue by more than 25 percent of the inspection frequency prescribed in IMC 2800. This was due to the inspection initially being inaccurately coded in the Agency's database. In addition, the Agency also performed 43 initial inspections during the review period, none of which were conducted overdue. Overall, the review team calculated that the Agency performed less than one percent of its inspections overdue during the review period.

The review team evaluated the Agency's timeliness in providing inspection findings to licensees. A random sampling of inspection reports indicated that none of the inspection findings were communicated to the licensees beyond the Agency's goal of 30 days after the inspection has been completed.

During the review period, the Agency granted 56 reciprocity permits, all of which were candidate licensees based upon the criteria in IMC 1220. The review team determined that the Agency inspected more than 20 percent of candidate licensees operating under reciprocity in each of the two years covered by the review period.

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

### 3.3 Technical Quality of Inspections

The review team evaluated inspection reports, enforcement documentation and inspection field notes, and interviewed inspectors for 22 radioactive materials inspections conducted during the review period. The casework reviewed included inspections conducted by five Agency inspectors and covered inspections of various license types, including: academic broadscope; medical broadscope; medical – therapy, including high dose-rate remote afterloaders, permanent implant brachytherapy, and gamma stereotactic radiosurgery; medical – diagnostic, including positron emission tomography;

industrial radiography; well logging; self-shielded irradiators; and a nuclear pharmacy. 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 reviewed covered all aspects of the licensees' radiation safety and security programs. The review team noted that the inspections also covered the Increased Controls, Fingerprinting requirements, and the National Source Tracking System requirements when appropriate. 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. Inspection report documentation supported violations, recommendations made to licensees, unresolved safety issues, and discussions held with licensees both during the inspection as well as during exit meetings.

The inspection procedures used by the Agency are consistent with the inspection guidance outlined in IMC 2800. Inspection reports are first completed by the inspector, peer reviewed by another staff member, then reviewed and signed by the Program Manager and finally reviewed and signed by the Agency Director.

The review team determined that inspection findings were appropriate with prompt regulatory actions taken when necessary. Inspection findings were clearly stated and documented in the inspection field notes. If issues are found, the Agency initially issues a Preliminary Findings letter within 30 days detailing the findings and requests that the licensee respond in writing either disputing or agreeing with the Agency's determination. If the licensee responds agreeing with the preliminary findings, the Agency issues a Notice of Violation requesting a response with corrective actions. If the licensee's initial response includes corrective actions that are sufficient to close the violation, a Notice of Violation is issued indicating no response is required. If a preliminary finding is disputed, the Agency Director has the authority to agree with the licensee's response and remove the finding or modify the severity level of the finding, or allow it to stand as originally issued. If the licensee disagrees with the Agency Director's determination, the licensee is able to request a hearing to dispute it.

While on site, the review team evaluated the Agency's handling and storage of sensitive documents. The Agency had a documented policy in place for the safe handling of sensitive information, which was available to the staff. The review team found that the Agency had 14 license files and a small number of reciprocity files containing sensitive information that were properly marked and secured in accordance with their current policy. Sensitive documents are not subject to release under the State's equivalent to the Freedom of Information Act.

The review team verified that the Agency maintains an adequate supply of appropriately calibrated survey instruments to support the inspection program, as well as to respond to radioactive materials incidents and emergency situations. Survey instruments are calibrated by the manufacturer or a local vendor in the Phoenix area. The Agency also has a laboratory section that provides laboratory and sample analysis support. The Agency uses a database to track each instrument, its current location, and next calibration date.

An IMPEP team member accompanied three Agency inspectors during the week of April 20, 2012. The inspectors were accompanied during health and safety inspections of two

medical facilities using a high dose-rate remote afterloader and a permanent implant brachytherapy program. The accompaniments are identified in Appendix C. During the accompaniments, the inspectors demonstrated appropriate inspection techniques, knowledge of the regulations, and conducted performance-based inspections. The inspectors were trained, well prepared for the inspection, and thorough in their evaluations of the licensees' radiation safety programs. The inspectors conducted interviews with appropriate personnel, identified risk-significant activities, observed licensed operations when available, conducted confirmatory measurements, and used good health physics practices. The inspections were adequate to assess radiological health, safety, and security at the licensed facilities.

Based on the IMPEP evaluation criteria, the review team recommends that Arizona'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 license reviewers for 25 licensing actions for 24 specific licenses. Licensing actions were reviewed for completeness, consistency, proper radioisotopes and quantities, qualifications of authorized users, adequacy of facilities and equipment, adherence to good health physics practices, financial assurance, security requirements, operating and emergency procedures, appropriateness of license conditions, and overall technical quality. The casework was also reviewed for timeliness, use of appropriate correspondence, reference to appropriate regulations, supporting documentation, consideration of enforcement history, pre-licensing visits, peer or supervisory review, and proper signatures.

The licensing casework was selected to provide a representative sample of licensing actions completed during the review period. Licensing actions selected for evaluation included 5 new licenses, 4 renewals, 11 amendments, and 5 license terminations. Casework reviewed included a cross-section of license types, including: medical and academic broadscope, medical, distribution of generally licensed devices, manufacturing and distribution broadscope, gamma stereotactic radiosurgery, industrial radiography, portable gauge, production of radioactive materials using a cyclotron, self-shielded irradiator, well-logging, nuclear pharmacy, and veterinary services. A listing of the licensing casework reviewed, with case-specific comments, can be found in Appendix D.

Upon receipt of license applications, the Agency enters into a logbook the date that each application is received, license number, type of licensing action, and expected number of days for completion. The Agency assigns each licensing action to a qualified license reviewer. Upon successful completion by the first reviewer, a second qualified reviewer performs an independent review of the licensing action. The Program Manager typically performs a third technical review prior to submittal to the Agency Director for signature. The Agency then records final metrics of each completed licensing action in the log book to include license issue date, review time in days and, as applicable, dates of any deficiency letters and licensee responses.

The review team found that the licensing actions were thorough, complete, consistent, and of high quality with health, safety, and security issues properly addressed. License tie-down conditions were stated clearly, backed by information contained in the file, and enforceable. The review team found that actions terminating licenses were well documented, included the appropriate material survey records, and contained documentation of proper disposal or transfer or radioactive material, as appropriate.

The review team identified one license that had authorized distribution of devices to persons generally licensed and to persons specifically licensed was terminated without addressing the inactivation or transfer of four sealed source and device (SS&D) registrations made part of the license and issued by the Agency. The registrations identify fixed gauge model devices that may be specifically or generally licensed. During the onsite review, the Agency contacted its former licensee and also the Agreement State to where the former licensee relocated. The Program Manager committed to the review team that the Agency will address the inactivation of the four SS&D registrations in the near future. The Agency was actively working on addressing the inactivations at the conclusion of the onsite review.

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

### 3.5 Technical Quality of Incident and Allegation Activities

In evaluating the effectiveness of the Agency's actions in responding to incidents and allegations, the review team examined the Agency's response to the questionnaire relative to this indicator, evaluated selected incidents reported for Arizona in the Nuclear Material Events Database (NMED) against those contained in the Agency's files, and evaluated the casework for ten reportable radioactive materials incidents. A listing of the incident casework examined can be found in Appendix E. Additionally, the review team reviewed the casework for eight non-reportable radioactive materials incidents. The review team also evaluated the Agency's response to the only allegation received by the Agency during the review period involving radioactive materials. No allegations were referred to the State by the NRC during the review period.

The incidents selected for review included the following categories: lost/stolen radioactive material, medical event, damaged equipment, and contamination event. The review team determined that the Agency's responses to incidents were complete and comprehensive. Initial responses were prompt and well-coordinated, and the level of effort for each response was commensurate with the health and safety significance. Inspectors were dispatched for onsite investigations when appropriate. Enforcement and/or other regulatory actions were taken as appropriate. The Agency dispatched inspectors for onsite investigations in five of the cases reviewed and took suitable enforcement and followup actions. The actions taken in response to incidents were documented and filed, and the data were submitted to NRC's contractor responsible for maintaining NMED for inclusion in the database. If the incident met the reportability thresholds, as established in FSME Procedure SA-300, "Reporting Material Events," the State notified the NRC Headquarters Operations Center and submitted data to the NRC's contractor responsible for maintaining NMED to enter the information into NMED, in a prompt manner.

An additional incident occurred during the onsite review, and an IMPEP team member accompanied the Agency on its response to an abandoned fixed gauge. The response was prompt and well coordinated. The Agency took appropriate action and developed a well thought out followup plan to dispose of the gauge.

In evaluating the effectiveness of the Agency's response to allegations, the review team evaluated the completed casework for the only allegation received. The review team concluded that the Agency took prompt and appropriate actions in response to the concern raised. The review team noted that the Agency documented the investigation of the concern and retained all necessary documentation to appropriately close the allegation. The Agency notified the concerned individual of the conclusion of its investigation. The review team determined that the Agency adequately protected the identity of the concerned individual.

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

#### 4.0 NON-COMMON PERFORMANCE INDICATORS

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

##### 4.1 Compatibility Requirements

###### 4.1.1 Legislation

Arizona became an Agreement State on May 15, 1967. The statutory authority for the Arizona program is found in the State's Radiation Control Program, Title 30, Chapter 4 of the Arizona Revised Statutes, "Control of Ionizing Radiation." The Agency is designated as the State's radiation control agency and implements the radiation control program.

The review team noted that no legislation affecting the radiation control program's authority was passed during the review period.

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

The Agency's regulations for control of radiation are found in the Arizona Administrative Code under Title 12, Chapter 1, "Radiation Regulatory Agency," Articles 1 through 17, and apply to all radioactive materials and devices designed to produce radiation.

The Arizona Statutes require the Agency to review all regulations every 5 years. For each regulation, the Agency must describe the effectiveness of the regulation and provide the statutory authority under which the regulation is issued. The Agency must also demonstrate

that the regulation is consistent with other Agency regulations, and that the regulation is clear and understandable. In addition, in developing regulations, the Agency is to consider the economic impact on small businesses and consumers.

The review team examined the State's administrative rulemaking process and found that it takes approximately 1 to 3 years to promulgate a final rule. After preparation of a regulation package, the Agency publishes the proposed rules in the State Register, and sends the rules to the NRC and the Arizona Radiation Regulatory Hearing Board, which is the Agency's statutory board. The Agency must obtain approval from the Governor's Regulatory Review Council prior to publication of a final rule. The State's process allows opportunity for members of the public and other stakeholders to comment on proposed rules. The State has the authority to issue legally binding requirements (e.g., license conditions) until equivalent State rules become effective.

The review team evaluated Arizona's response to the questionnaire relative to this indicator, reviewed the status of regulations required to be adopted by the State under the Commission's adequacy and compatibility policy, and verified the adoption of regulations with data obtained from the State Regulation Status Sheet that FSME maintains.

During the review period, Arizona submitted 12 final regulation amendments and 1 legally binding license condition to the NRC for a compatibility review. Current NRC policy requires that Agreement States adopt certain equivalent regulations or legally binding requirements no later than 3 years after the effective date of NRC's regulations. All 12 of the regulation amendments were overdue for State adoption at the time of submission. The NRC's compatibility review resulted in seven comments that will need to be addressed by the State in upcoming rulemaking activities.

At the time of this review, the following eight amendments were overdue:

- "Decommissioning Recordkeeping and License Termination: Documentation Additions [Restricted areas and spill sites]," 10 CFR Parts 30 and 40 amendment (58 FR 39628) that was due for Agreement State implementation by October 25, 1996.
- "Frequency of Medical Examinations for Use of Respiratory Protection Equipment," 10 CFR Part 20 amendment (60 FR 7900) that was due for Agreement State implementation by March 13, 1998.
- "Medical Administration of Radiation and Radioactive Materials," 10 CFR Parts 20 and 35 amendment (60 FR 48623) that was due for Agreement State implementation by October 20, 1998.
- "Medical Use of Byproduct Material - Recognition of Specialty Boards," 10 CFR Part 35 amendment (70 FR 16336 and 71 FR 1926), that was due for Agreement State implementation by April 29, 2008.
- "Minor Amendments," 10 CFR Parts 20, 30, 32, 35, 40, and 70 amendment (71 FR 15005) that was due for Agreement State implementation by March 27, 2009.

- “Medical Use of Byproduct Material – Minor Corrections and Clarifications,” 10 CFR Parts 32 and 35 amendment (72 FR 45147 and 72 FR 54207) that was due for Agreement State implementation by October 29, 2010.
- “Requirements for Expanded Definition of Byproduct Material,” 10 CFR Parts 20, 30, 31, 32, 33, 35, 61, and 150 amendment (72 FR 55864) that was due for Agreement State adoption by November 30, 2010.
- “Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent,” 10 CFR Parts 19 and 20 amendment (72 FR 68043) that was due for Agreement State implementation by February 15, 2011.

At the time of the review, the Agency was in the process of obtaining the necessary approvals to initiate the rulemaking process to address the overdue amendments despite the moratorium.

The Agency will need to address the following amendments in the future:

- “Medical Use of Byproduct Material – Authorized User Clarification,” 10 CFR Part 35 amendment (74 FR 33901) that is due for Agreement State implementation by September 28, 2012.
- “Decommissioning Planning,” 10 CFR Parts 20, 30, 40, and 70 amendment (76 FR 35512) that is due for Agreement State implementation by December 17, 2015.
- “Licenses, Certifications, and Approvals for Materials Licensees,” 10 CFR Parts 30, 36, 39, 40, 70, and 150 amendment (76 FR 56591) that is due for Agreement State implementation by November 14, 2014.

Based on the IMPEP evaluation criteria, the review team recommends that Arizona’s performance with respect to the indicator, Compatibility Requirements, be found satisfactory, but needs improvement.

#### 4.2 Sealed Source and Device Evaluation Program

Although the Arizona Agreement State Program has authority to conduct Sealed Source and Device (SS&D) evaluations for byproduct, source, and certain special nuclear materials, the Agency did not conduct any SS&D evaluations during the review period nor did the Agency have any pending applications for an SS&D evaluation. The Agency determined, and the review team verified, through performance of NMED searches, that there were no generic defects identified for any SS&D products registered by the Agency during the review period. The Agency reports that it has not received any allegations related to SS&D products registered by the Agency during the review period. The Agency maintains the same two SS&D reviewers as it had during the prior review, with exception that the one reviewer who had previously not attended the NRC SS&D course, attended and completed the NRC SS&D training course during the review period. Accordingly, the review team did not fully review this indicator, and therefore, did not assign an indicator rating.

#### 4.3 Low-level Radioactive Waste 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 Low-level Radioactive Waste (LLRW) as a separate category. Although the Arizona 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 which will meet the criteria for an adequate and compatible LLRW disposal program. There are no plans for a LLRW disposal facility in Arizona. Accordingly, the review team did not review this indicator.

## 5.0 SUMMARY

As noted in Sections 3.0 and 4.0 above, Arizona's performance was found satisfactory for five of the six performance indicators reviewed and satisfactory, but needs improvement, for the indicator, Compatibility Requirements. The review team did not make any recommendations regarding program performance by the State and determined that the recommendations from the 2010 IMPEP review should be closed. Accordingly, the review team recommends that the Arizona 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, with a periodic meeting in 1 year. The review team also recommends that the period of Heightened Oversight of the Arizona Agreement State Program be discontinued.



## LIST OF APPENDIXES

Appendix A	IMPEP Review Team Members
Appendix B	Arizona 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>
Aaron McCraw, Region III	Team Leader Technical Staffing and Training Compatibility Requirements
Orysia Masnyk Bailey, Region I	Team Leader in Training Technical Quality of Incident and Allegation Activities
Randy Erickson, Region IV	Status of Materials Inspection Program Technical Quality of Inspections Inspector Accompaniments
Joshua Daehler, Massachusetts	Technical Quality of Licensing Actions Sealed Source and Device Evaluation Program

APPENDIX B

ARIZONA ORGANIZATION CHARTS

ADAMS ACCESSION NO.: ML120790044

## APPENDIX C

### INSPECTION CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1		
Licensee: Siemens Medical Solutions		License No.: IL-01130-02
Inspection Type: Reciprocity, Unannounced		Priority: 5
Inspection Date: 2/22/11		Inspector: WY
File No.: 2		
Licensee: GE Healthcare		License No.: WI-133-1107-01
Inspection Type: Reciprocity, Unannounced		Priority: 5
Inspection Date: 11/29/11		Inspector: WY
File No.: 3		
Licensee: Phoenix CyberKnife Radiation Oncology Center		License No.: 7-661
Inspection Type: Routine, Unannounced		Priority: 2
Inspection Date: 11/9/11		Inspector: DK
File No.: 4		
Licensee: Surgery Center of Gilbert		License No.: 7-549
Inspection Type: Routine, Unannounced		Priority: 3
Inspection Date: 2/22/12		Inspector: PK
File No.: 5		
Licensee: 21 <sup>st</sup> Century Oncology of Arizona		License No.: 7-153
Inspection Type: Routine, Unannounced		Priority: 3
Inspection Date: 2/15/12		Inspector: WY
File No.: 6		
Licensee: CIGNA Healthcare of Arizona, Inc.		License No.: 7-456
Inspection Type: Routine, Unannounced		Priority: 3
Inspection Date: 6/6/11		Inspector: DK
File No.: 7		
Licensee: Banner Gateway Medical Center		License No.: 7-582
Inspection Type: Routine, Unannounced		Priority: 2
Inspection Date: 4/27/10		Inspector: WY
File No.: 8		
Licensee: Team Industrial Services, Inc.		License No.: 7-493
Inspection Type: Routine, Unannounced		Priority: 1
Inspection Dates: 4/15/11 and 4/27/11		Inspector: BG

File No.: 9

Licensee: AMEC Earth and Environmental  
Inspection Type: Routine, Unannounced  
Inspection Date: 1/24/12

License No.: 7-369  
Priority: 1  
Inspector: WY

File No.: 10

Licensee: Arizona Oncology Services  
Inspection Type: Routine, Unannounced  
Inspection Date: 2/21/12

License No.: 7-161  
Priority: 3  
Inspector: WY

File No.: 11

Licensee: Banner Thunderbird Medical Center  
Inspection Type: Routine, Unannounced  
Inspection Date: 2/22/12

License No.: 7-142  
Priority: 3  
Inspector: DK

File No.: 12

Licensee: Raytheon Missile Systems  
Inspection Type: Routine, Unannounced  
Inspection Date: 6/8/11

License No.: 10-167  
Priority: 5  
Inspector: WY

File No.: 13

Licensee: Southwest Exploration Services  
Inspection Type: Routine, Announced  
Inspection Date: 5/26/10

License No.: 7-492  
Priority: 3  
Inspectors: DK, JH

File No.: 14

Licensee: Canyon State Inspection  
Inspection Type: Routine, Unannounced  
Inspection Date: 6/14/11

License No.: 10-101  
Priority: 1  
Inspector: WY

File No.: 15

Licensee: Arizona State University  
Inspection Type: Routine, Unannounced  
Inspection Dates: 4/19-20/12

License No.: 7-037  
Priority: 3  
Inspectors: DK, WY

File No.: 16

Licensee: United Blood Services of Arizona  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/11/11

License No.: 7-299  
Priority: 5  
Inspector: WY

File No.: 17

Licensee: Cardinal Health  
Inspection Type: Routine, Unannounced  
Inspection Date: 4/21/10

License No.: 7-123  
Priority: 2  
Inspector: WY

File No.: 18

Licensee: SMI Imaging LLC  
Inspection Type: Initial, Unannounced  
Inspection Date: 5/10/11

License No.: 7-593  
Priority: 3  
Inspector: WY

File No.: 19

Licensee: Desert Springs Cancer Care  
Inspection Type: Initial, Unannounced  
Inspection Date: 10/20/11

License No.: 7-663  
Priority: 3  
Inspector: WY

File No.: 20

Licensee: Scottsdale Memorial Health Services, Co., Inc.  
Inspection Type: Routine, Unannounced  
Inspection Date: 4/7/10

License No.: 7-177  
Priority: 3  
Inspector: WY

File No.: 21

Licensee: John C. Lincoln Hospital-Deer Valley  
Inspection Type: Routine, Unannounced  
Inspection Date: 1/5/12

License No.: 7-311  
Priority: 3  
Inspector: WY

File No.: 22

Licensee: Cancer Treatment Services of Arizona  
Inspection Type: Routine, Unannounced  
Inspection Date: 4/7/10

License No.: 11-026  
Priority: 3  
Inspector: WY

#### INSPECTOR ACCOMPANIMENTS

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

Accompaniment No.: 1

Licensee: Arizona Oncology Services  
Inspection Type: Routine, Unannounced  
Inspection Date: 2/21/12

License No.: 7-161  
Priority: 3  
Inspector: WY

Accompaniment No.: 2

Licensee: Surgery Center of Gilbert  
Inspection Type: Routine, Unannounced  
Inspection Date: 2/22/12

License No.: 7-549  
Priority: 3  
Inspector: PK

Accompaniment No.: 3

Licensee: Banner Thunderbird Medical Center  
Inspection Type: Routine, Unannounced  
Inspection Date: 2/22/12

License No.: 7-142  
Priority: 3  
Inspector: DK

APPENDIX D

LICENSE CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1

Licensee: Honeywell International, Inc.  
Type of Action: Termination  
Date Issued: 10/6/08

License No.: 07-513  
Amendment No.: 5  
License Reviewers: PK, BG

Comment: The license was terminated without addressing the inactivation or transfer of four SS&D registrations that were associated with the license. The four registrations are AZ-0501-D-105-B; AZ-0501-D-106-B; AZ-0501-D-107-B; and AZ-0501-D-108-B.

File No.: 2

Licensee: Honeywell International, Inc.  
Type of Action: Termination  
Dates Issued: 10/6/08

License No.: 07-510  
Amendment No.: 4  
License Reviewers: PK, BG

File No.: 3

Licensee: Honeywell Engines, Systems & Services  
Type of Action: Amendment  
Dates Issued: 2/28/12

License No.: 07-027  
Amendment No.: 50  
License Reviewers: WY, DK

File No.: 4

Licensee: Honeywell International, Incorporated  
Type of Action: Amendment  
Date Issued: 1/19/12

License No.: 07-316  
Amendment No.: 14  
License Reviewers: DK, PK

File No.: 5

Licensee: TLS Systems, Inc.  
Type of Action: Amendment  
Date Issued: 6/16/11

License No.: 10-086  
Amendment No.: 22  
License Reviewers: PK, WY

File No.: 6

Licensee: Arizona State University  
Type of Action: Termination  
Date Issued: 8/6/10

License No.: 07-489  
Amendment No.: 8  
License Reviewers: PK, JP

File No.: 7

Licensee: Mistras Group, Inc.  
Type of Action: Termination  
Date Issued: 1/31/12

License No.: 15-094  
Amendment No.: 4  
License Reviewers: PK, WY

File No.: 8

Licensee: St. Joseph's Hospital and Medical Center  
Type of Action: Amendment  
Date Issued: 7/25/11

License No.: 07-024  
Amendment No.: 112  
License Reviewers: PK, DK

File No.: 9

Licensee: Veterinary Specialty Center of Tucson  
Type of Action: New  
Date Issued: 5/23/11

License No.: 10-169  
Amendment No.: N/A  
License Reviewers: PK, BG

Comment: The pre-licensing checklist was not properly completed.

File No.: 10

Licensee: Florence Hospital of Anthem  
Type of Action: New  
Date Issued: 12/14/11

License No.: 11-029  
Amendment No.: N/A  
License Reviewers: PK, WY

Comment: The pre-licensing checklist was not properly completed.

File No.: 11

Licensee: Banner Page Medical Center  
Types of Action: New  
Dates Issued: 11/17/11

License No.: 03-043  
Amendment Nos.: N/A  
License Reviewers: PK, DK

File No.: 12

Licensee: DEH, LLC  
Types of Action: New  
Dates Issued: Various

License No.: 07-667  
Amendment No.: N/A  
License Reviewers: PK, DK

Comment: The pre-licensing checklist was not properly completed.

File No.: 13

Licensee: Hualapai Mountain Medical Center  
Type of Action: Termination  
Date Issued: 11/1/11

License No.: 08-045  
Amendment No.: 2  
License Reviewers: DK, PK

File No.: 14

Licensee: Western Technologies, Incorporated  
Type of Action: Renewal  
Date Issued: 8/29/11

License No.: 07-049  
Amendment No.: 68  
License Reviewers: PK, DK

File No.: 15

Licensee: Banner Good Samaritan Medical Center  
Type of Action: Renewal  
Date Issued: 6/1/11

License No.: 07-478  
Amendment No.: 30  
License Reviewers: PK, WY



File No.: 16

Licensee: Banner Good Samaritan Medical Center  
Type of Action: Amendment  
Date Issued: 1/27/12

License No.: 07-478  
Amendment No.: 32  
License Reviewers: PK, DK

File No.: 17

Licensee: University of Arizona  
Type of Action: Amendment  
Date Issued: 9/22/11

License No.: 10-024  
Amendment No.: 80  
License Reviewers: PK, WY

File No.: 18

Licensee: University of Arizona  
Type of Action: Amendment  
Date Issued: 4/19/11

License No.: 10-044  
Amendment No.: 66  
License Reviewers: PK, BG

File No.: 19

Licensee: Smith & Annala Engineering, Co.  
Type of Action: New  
Date Issued: 11/7/11

License No.: 07-668  
Amendment No.: N/A  
License Reviewers: PK, WY

Comment: The pre-licensing checklist was not properly completed.

File No.: 20

Licensee: Arizona State University  
Type of Action: Amendment  
Date Issued: 1/27/12

License No.: 07-037  
Amendment No.: 84  
License Reviewers: PK, DK

File No.: 21

Licensee: Southwest Exploration Services, L.L.C.  
Type of Action: Amendment  
Date Issued: 12/12/11

License No.: 07-492  
Amendment No.: 19  
License Reviewers: DK, PK

File No.: 22

Licensee: Phoenix Cyberknife Radiation Oncology Center, LLC  
Type of Action: Amendment  
Date Issued: 10/3/11

License No.: 07-661  
Amendment No.: 1  
License Reviewers: PK, BG

File No.: 23

Licensee: Cardinal Health  
Type of Action: Renewal  
Date Issued: 3/5/12

License No.: 07-123  
Amendment No.: 121  
License Reviewers: PK, DK

File No.: 24

Licensee: Cardinal Health 414, L.L.C.  
Type of Action: Amendment  
Date Issued: 1/20/12

License No.: 07-529  
Amendment No.: 20  
License Reviewers: PK, WY

File No.: 25

Licensee: Saint Joseph's Hospital and Medical Center

Type of Action: Renewal

Date Issued: 1/23/12

License No.: 07-424

Amendment No.: 10

License Reviewers: PK, WY

## APPENDIX E

### INCIDENT CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1  
Licensee: (General) Walmart  
Date of Incident: 5/12/08  
Investigation Date: 5/12/08  
License No.: N/A  
NMED No.: 080284  
Type of Incident: Contamination Event  
Type of Investigation: Licensee Report

File No.: 2  
Licensee: Pattison Evanoff Engineering, LLC  
Date of Incident: 7/27/09  
Investigation Date: 7/31/09  
License No.: 10-134  
NMED No.: 090630  
Type of Incident: Lost/Stolen RAM  
Type of Investigation: Onsite

File No.: 3  
Licensee: Medi-Physics, Incorporated  
Date of Incident: 7/27/09  
Investigation Date: 7/27/09  
License No.: 07-346  
NMED No.: 090648  
Type of Incident: Lost/Stolen RAM  
Type of Investigation: Licensee Report

File No.: 4  
Licensee: Arizona Department of Transportation  
Date of Incident: 6/4/10  
Investigation Date: 6/12/12  
License No.: 7-31  
NMED No.: 100350  
Type of Incident: Damaged Equipment  
Type of Investigation: Licensee Report

File No.: 5  
Licensee: Curran Sessums and Associates  
Date of Incident: 11/1/08  
Investigation Date: 7/9/10  
License No.: 7-470  
NMED No.: 100412  
Type of Incident: Lost/Stolen RAM  
Type of Investigation: Onsite

File No.: 6  
Licensee: Banner Good Samaritan Medical Center  
Date of Incident: 12/22/10  
Investigation Dates: 1/11&25/11  
License No.: 7-478  
NMED No.: 110005  
Type of Incident: Medical Event  
Type of Investigation: Onsite

File No.: 7  
Licensee: MACTEC Engineering and Consulting, Inc.  
Date of Incident: 3/28/11  
Investigation Date: 3/31/11  
License No.: 7-326  
NMED No.: 110149  
Type of Incident: Lost/Stolen RAM  
Type of Investigation: Onsite

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File No.: 8

Licensee: Western Technologies, Inc.

Date of Incident: 12/20/10

Investigation Date: 12/20/10

License No.: 7-80

NMED No.: 110001

Type of Incident: Lost/Stolen RAM

Type of Investigation: Licensee Report

File No.: 9

Non-Licensee: Sims Metal Management

Date of Incident: 11/3/11

Investigation Date: 11/8/11

License No.: N/A

NMED No.: 110614

Type of Incident: Lost/Stolen RAM

Type of Investigation: Onsite

File No.: 10

Non-Licensee: Liberty Iron & Metal

Date of Incident: 1/25/12

Investigation Date: 1/25/12

License No.: N/A

NMED No.: 120132

Type of Incident: Lost/Stolen RAM

Type of Investigation: Licensee Report

ATTACHMENT(S)

May 7, 2012 Letter from Kevin Kinsall  
Arizona's Response to the Draft Report  
ADAMS Accession No.: ML12137A016

**Agenda for Management Review Board Meeting  
June 12, 2012, 1:00 p.m. – 4:00 p.m. (EDT), OWFN-17-B4**

1. Announcement of public meeting. Request for members of the public to indicate they are participating and their affiliation.
2. MRB Chair convenes meeting. Introduction of MRB members, review team members, State representatives, and other participants.
3. Consideration of the Arizona IMPEP Report.
  - A. Presentation of Findings Regarding Arizona's Program and Discussion.
    - Technical Staffing and Training
    - Status of Materials Inspection Program
    - Technical Quality of Inspections
    - Technical Quality of Licensing Actions
    - Technical Quality of Incident and Allegation Activities
    - Compatibility Requirements
    - Sealed Source and Device Evaluation Program
  - B. IMPEP Team Recommendations.
    - Recommendation for Adequacy and Compatibility Ratings
    - Recommendation for Next IMPEP Review
  - C. MRB Consultation/Comments on Issuance of Report.
4. Request for comments from Arizona representatives, OAS Liaison, and State IMPEP team members.
5. Adjournment.

Invitees:	Michael Weber, DEDMRT	Cynthia Carpenter, FSME
	Bradley Jones, OGC	Brian McDermott, FSME
	Mark Satorius, FSME	Duncan White, FSME
	William Dean, RI	Lisa Dimmick, FSME
	Alice Rogers, TX	Michelle Beardsley, FSME
	Aaron McCraw, RIII	Karen Meyer, FSME
	Randy Erickson, RIV	Daniel Merzke, OEDO
	Orysia Masnyk-Bailey, RI	Aubrey Godwin, AZ
	Joshua Daehler, MA	