

December 20, 2002

Fay Boozman, M.D., M.P.H.  
Director  
Arkansas Department of Health  
4815 West Markham Street, Slot 30  
Little Rock, Arkansas 72205-3867

Dear Dr. Boozman:

On November 26, 2002, the Management Review Board (MRB) met to consider the proposed final Integrated Materials Performance Evaluation Program (IMPEP) report on the Arkansas Agreement State Program. The MRB found the Arkansas program adequate to protect public health and safety and compatible with the Nuclear Regulatory Commission's (NRC) program.

Section 5.0, page 14, of the enclosed final report presents the IMPEP team's recommendations for the State of Arkansas. We request your response to the recommendations within 30 days of your receipt of this letter.

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

I appreciate the courtesy and cooperation extended to the IMPEP team during the review. We appreciate your continued support for the Radiation Control Program and the excellence in program administration demonstrated by your staff as is reflected in the team's findings. I look forward to our agencies continuing to work cooperatively in the future.

Sincerely,

*/RA by Paul H. Lohaus for/*

Carl J. Paperiello  
Deputy Executive Director  
for Materials, Research and State Programs

Enclosure:  
As stated

cc: Jared Thompson, Program Leader  
Radioactive Materials Section

Bernard Bevill, Team Leader  
Radiation Control and Emergency  
Management Program

Steve Collins, IL  
OAS Liaison to MRB

Fay Boozman, M.D., M.P.H.  
Director  
Arkansas Department of Health  
4815 West Markham Street, Slot 30  
Little Rock, Arkansas 72205-3867

December 20, 2002

Dear Dr. Boozman:

On November 26, 2002, the Management Review Board (MRB) met to consider the proposed final Integrated Materials Performance Evaluation Program (IMPEP) report on the Arkansas Agreement State Program. The MRB found the Arkansas program adequate to protect public health and safety and compatible with the Nuclear Regulatory Commission's (NRC) program.

Section 5.0, page 14, of the enclosed final report presents the IMPEP team's recommendations for the State of Arkansas. We request your response to the recommendations within 30 days of your receipt of this letter.

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

I appreciate the courtesy and cooperation extended to the IMPEP team during the review. We appreciate your continued support for the Radiation Control Program and the excellence in program administration demonstrated by your staff as is reflected in the team's findings. I look forward to our agencies continuing to work cooperatively in the future.

Sincerely,  
*/RA by Paul H. Lohaus for/*

Carl J. Paperiello  
Deputy Executive Director  
for Materials, Research and State Programs

Enclosure:  
As stated

cc: Jared Thompson, Program Leader  
Radioactive Materials Section

Bernard Bevill, Team Leader  
Radiation Control and Emergency  
Management Program

Steve Collins, IL  
OAS Liaison to MRB

bcc: Chairman Meserve  
Commissioner Dicus  
Commissioner Diaz  
Commissioner McGaffigan  
Commissioner Merrifield

Distribution: See next page

ML023440432

**DOCUMENT NAME: G:\IMPEP\ML023440435.wpd**

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	STP	STP:DD	STP:D	DEDMRS	
NAME	PMLarkins:gd	JMPiccone	PHLohaus	CJPaperiello (PLohaus for)	
DATE	11/27/02	11/27/02	12/10/02	12/20/02	

Distribution:

DIR RF

KSchneider, STP

LRakovan, STP

JZabko, STP/ASPO

DCool, NMSS/IMNS

RStruckmeyer, NMSS/IMNS

VCampbell, RIV

JCameron, RIII

MStephens, FL

STreby, OGC

JLieberman, OGC

Arkansas File

DCD (SP01) PDR (YES√)

TCombs, OCA (2 copies)

FCameron, OGC

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM  
REVIEW OF ARKANSAS AGREEMENT STATE PROGRAM

September 9-13, 2002

**FINAL REPORT**

U.S. Nuclear Regulatory Commission

## 1.0 INTRODUCTION

This report presents the results of the review of the Arkansas Agreement State program. The review was conducted during the period September 9-13, 2002, by a review team consisting of technical staff members from the Nuclear Regulatory Commission (NRC) and the Agreement State of Florida. Team members are identified in Appendix A. The review was conducted in accordance with the "Implementation of the Integrated Materials Performance Evaluation Program and Rescission of a Final General Statement of Policy," published in the Federal Register on October 16, 1997, and the November 5, 1999, [NRC Management Directive 5.6](#), "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period of March 28, 1998 to September 8, 2002, were discussed with Arkansas management on September 13, 2002.

A draft of this report was issued to Arkansas for factual comment on October 23, 2002. The State responded by electronic mail dated November 8, 2002. The Management Review Board (MRB) met on November 26, 2002 to consider the proposed final report. The MRB found the Arkansas radiation control program was adequate to protect public health and safety and compatible with NRC's program.

The Arkansas Agreement State Program is administered by the Department of Health (the Department). The Department reorganized in FY2000. Under the reorganization, the Radioactive Materials Section (the Section), which is managed by the Radioactive Materials Section Program Leader (the Program Leader) has direct responsibility for the Agreement State materials program. The Section is located in the Radiation Control and Emergency Management Team, under the Health Systems Group, which consists of five sections, as follows: Programs and Emergency Management, X-Ray, RT Licensure, Mammography, and the Radioactive Materials Section. Each Section reports to the Team Leader for Radiation Control and Emergency Management. The Team Leader is also responsible for budget, administrative operations, and coordination between upper management and the five sections. The Team Leader reports to the Health Systems Group Leader. The Group Leader reports to the Statewide Services Leader who reports directly to a seven member Agency Leadership Team (ALT), responsible for strategic agency-wide oversight and fiduciary responsibility. The ALT reports directly to the Department's State Health Officer. The less hierarchical team leader organization structure provides staff increased access to the Department's State Health Officer, who reports directly to the Governor. Organization charts for the Department and the Section are included in Appendix B.

At the time of the review, the Arkansas Agreement State program regulated 265 specific licenses authorizing Agreement materials. The review focused on the materials program as it is carried out under the Section 274b. (of the Atomic Energy Act of 1954, as amended) Agreement between the NRC and the State of Arkansas.

In preparation for the review, a questionnaire addressing the common and non-common performance indicators was sent to the Department on July 2, 2002. The Department provided a response to the questionnaire dated August 21, 2002. During the review, the review team identified several areas in the questionnaire response that needed to be clarified or modified. The Department provided an amended questionnaire response on September 24, 2002. A copy of the final questionnaire response can be found on NRC's Agencywide Document Access and Management System using the Accession Number ML022890596.

The review team's general approach for conduct of this review consisted of: (1) examination of Arkansas's responses to the questionnaire; (2) review of applicable Arkansas statutes and regulations; (3) analysis of quantitative information from the radiation control program licensing and inspection data base; (4) technical review of selected licensing and inspection actions; (5) field accompaniments of three Department inspectors; and (6) interviews with staff and management to answer questions or clarify issues. The review team evaluated the information that it gathered against the IMPEP performance criteria for each common and applicable non-common performance indicator and made a preliminary assessment of the Arkansas Agreement State program's performance.

Section 2 below discusses the State's actions in response to recommendations made following the previous IMPEP review. Results of the current review for the IMPEP common performance indicators are presented in Section 3. Section 4 discusses results of the applicable non-common performance indicators, and Section 5 summarizes the review team's findings. Recommendations made by the review team are comments that relate directly to 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 March 27, 1998, seven recommendations were made and transmitted to Sandra B. Nichols, M.D., Director, Arkansas Department of Health on July 8, 1998. The team's review of the current status of the recommendations are as follows:

1. The review team recommends that the Section continue to develop and implement the civil penalty portion of the updated escalated enforcement procedure in order to enhance its compliance program. (Section 3.1)

Current Status: The review team found that the Section implemented Procedure RAM - 03.8, "Escalated Enforcement Actions" in 1998, and has continued its use of management conferences as an effective escalated enforcement practice to resolve serious compliance issues. This recommendation is closed.

2. The review team recommends that the Section continue efforts to move its reciprocity inspection program towards the guidelines established in IMC 1220. (Section 3.1)

Current Status: The review team found that the Section developed Procedure RAM - 03.9, "Guideline for Compliance Inspection Frequency of NRC/Agreement State Reciprocity Licensees." Since 1998, the Division continued efforts to move its reciprocity inspection program towards the guidelines established in the previous version of IMC 1220. The review team found that the Section had exceeded the previously established reciprocity guidelines. The team discussed the current revised guidelines for reciprocity inspections, that contain a reduction in the level of effort for inspecting licensees from 50 to 20 percent. This recommendation is closed.

3. The review team recommends that the Section proceed expeditiously with its review and updating of compliance program guidance. (Section 3.2)

Current Status: The review team found that the inspection and compliance program guidance has been revised and implemented. This recommendation is closed.

4. The review team recommends that the Section staff revise the license reviewer guidance, including checklists, to address comprehensive radiation protection program reviews, annual program audits, and the need for financial assurance. (Section 3.4)

Current Status: The review team found that the revision to the radioactive materials licensing guidance checklists for specific activities, i.e., addressing comprehensive radiation protection program reviews, annual program audits, and the need for financial assurance, have been addressed through the manual addition of the elements to the checklist by each reviewer for each action. Due to time and personnel constraints, efforts to revise and update the generic licensing procedures that can be applied to all licensed activities have been limited. The review team has incorporated this item into the current recommendation in Section 3.3. This recommendation is closed.

5. The review team recommends that the State adequately document and closely follow the progress of investigations of incidents through close out. (Section 3.5)

Current Status: The review team found that the Section has performed appropriate and thorough investigations when deemed necessary, and that they have been documented adequately. This recommendation is closed.

6. The review team recommends that the State continue to report events and participate in the Nuclear Material Events Database (NMED) system by providing event information and close-out status to be added to the NMED system or by providing compatible information in accordance with the guidance contained in the "Handbook on Nuclear Event Reporting in the Agreement States." (Section 3.5)

Current Status: The review team found that the Section has developed internal policies and procedures for the use of the NMED system based on Office of State and Tribal Programs (STP) Procedure SA-300, Handbook on Nuclear Event Reporting in the Agreement States. Staff training has been provided on the implementation of these procedures and the Section has successfully submitted event information into the NMED system and all events closed by the State have been closed out in NMED. This recommendation is closed.

7. The review team recommends that any events involving a defective device or source in a device, be evaluated for possible generic implications and such information passed onto the manufacturer and NRC. (Section 4.2.3)

Current Status: The review team found that the Section has investigated events that involve defective devices or sources in a device. The team found that the Section is promptly notifying the NRC and the vendor of any events involving apparent defective devices, but the Section does not evaluate any apparent defective devices discovered for generic implications. This recommendation is closed.

During the 1998 review, two suggestions were made for the Department to consider. The review team determined that the Department considered the suggestions and took appropriate actions.

### 3.0 COMMON PERFORMANCE INDICATORS

IMPEP identifies five common performance indicators to be used in reviewing both NRC Regional and Agreement State programs. These indicators are: (1) Status of Materials Inspection Program; (2) Technical Quality of Inspections; (3) Technical Staffing and Training; (4) Technical Quality of Licensing Actions; and (5) Response to Incidents and Allegations.

#### 3.1 Status of Materials Inspection Program

The review team focused on four factors in reviewing the status of the materials inspection program: inspection frequency, overdue inspections, initial inspections of new licensees, and timely dispatch of inspection findings to the licensees. The review team's evaluation is based on the Department's questionnaire responses relative to this indicator, data gathered from reports generated from the licensee database, examination of completed licensing and inspection casework, and interviews with the Program Leader, and licensing and inspection staff.

The Section's RAM-01.09 procedure dated January 30, 2002, entitled "Assigning and Tracking Radioactive Material and Particle Accelerator Inspections," established that inspections should be conducted at least as frequent, or more frequent than the priority schedule in NRC Inspection Manual Chapter (IMC) 2800. The Section has an aggressive inspection schedule. Except for Priority 1 licenses, all other licenses are inspected more frequently than IMC 2800. For example, nuclear medicine licenses are Priority 1 or 2 based on volume of use in the Section's schedule versus Priority 3 in IMC 2800. Medical-private practice licenses which are Priority 5 in IMC 2800, are Priority 2 in the Section's schedule. Portable and fixed gauges are Priority 2 or 3 based on the number of sources possessed versus Priority 5 in IMC 2800. The review team noted that at the time of the review the Section had 72 Priority 1 licensees that were inspected annually. Thirty-three of the 72 Priority 1 licensees were inspected more frequently than the intervals specified in IMC 2800.

The Section's RAM-01.12 procedure dated January 30, 2002, entitled "Extension and Reduction of Inspection Frequencies" established a policy and procedure for changing inspection frequencies. Although the Section has procedures for extending inspection intervals on the basis of good licensee performance, the Program Leader indicated that they have rarely extended inspection intervals. The Section does, however, reduce inspection intervals based on poor licensee performance. Presently, 19 of the 72 Priority 1 licensees were on the annual inspection schedule because of poor performance.

The licensee database contains sufficient information for proper management of the inspection program. The review team noted that the number of inspections performed each year is increasing. In calendar year 1998, the Section performed approximately 92 inspections, 112 inspections in 1999, 135 inspections in 2000; and 152 inspections in 2001. The Section's Program Leader stated that resources had been focused on inspections to ensure that potential health and safety issues resulting from the licensing renewal backlog were identified and addressed. The licensing backlog is further discussed in Section 3.4.



At the time of the review, there were no overdue core inspections, including initial inspections. The review team examined the Section's tracking information for a total of 115 licenses, which included 42 initial inspections. During the review period, ten core inspections, including eight initial inspections were overdue when conducted. The overdue inspections ranged from two to 31 months overdue when conducted. The Section has had difficulty inspecting licensees authorized to conduct licensed activities at temporary jobsites when their corporate offices are located out-of-state and they do not have permanent field offices within the State. The Section management recognized that they were not able to meet the inspection goals for these licensees. In order to provide a reasonable opportunity to perform an inspection, the Section amended these licenses to require notification two days prior to entering the State to conduct licensed activities.

During the review period, the Section granted 179 reciprocity permits. The Section's RAM-01.09 procedure is used to establish the priority for inspection frequencies of reciprocity licensees. Consequently, the Priority 3 reciprocity licensees identified in the Section's response to the questionnaire were industrial gauge licensees which are not core inspections under the guidance in IMC 1220. Notwithstanding the aggressive inspection schedule, the Section met and exceeded the reciprocity inspection goals identified in the previous version of IMC 1220 throughout the review period. As noted in Section 2.0, the review team also discussed the current revised guidelines for reciprocity inspections contained in IMC 1220, dated June 6, 2002.

The timeliness of the issuance of inspection findings was evaluated during the inspection file review. The Section has an ambitious goal of transmitting inspection reports with items of noncompliance to the licensee within seven working days after the inspector returns to the office. The review team noted that the Section generally met their goal. For all casework reviewed, all inspection findings were sent to the licensees within 30 days.

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

### 3.2 Technical Quality of Inspections

The team evaluated the inspection reports, enforcement documentation, and inspection field notes, and interviewed inspectors for 23 materials inspections conducted during the review period. The casework reviewed included inspections by five inspectors, and covered inspections of various types including: industrial radiography, portable gauge, large academic, radiopharmacy, medical private practice, service provider, well logging, gamma knife, medical institution and irradiator facilities. Appendix C lists the inspection casework files reviewed for completeness and adequacy with case-specific comments.

Based on the casework file reviews, the review team found that routine inspections covered all aspects of a licensee's radiation protection program. Inspection reports generally were thorough, complete, consistent, and of high quality, with sufficient documentation to ensure acceptable performance with respect to health and safety by the licensee. In most cases, the documentation adequately supported the cited violations, recommendations made to licensees, unresolved safety issues, and discussions held with the licensee during exit meetings. Team inspections were performed when appropriate and for training purposes.

During the review period, the Program Leader accompanied all individuals who performed materials inspections. The accompaniment reports contained sufficient details to document the areas covered. The accompanied inspectors are provided a copy of the accompaniment report in their personnel file and receive an oral report of their individual performance.

The review team accompanied three inspectors during the period of August 12 -16, 2002. One inspector was accompanied on inspections of an academic licensee and a large medical licensee. The second inspector was accompanied on inspections of a large medical licensee, with the first inspector and a radiopharmacy licensee. The third inspector was accompanied on inspections of an industrial radiography licensee and a private practice medical clinic. The facilities inspected are identified in Appendix C. During the accompaniments, the inspectors demonstrated appropriate performance-based inspection techniques and knowledge of the regulations. Each of the inspectors was well prepared and thorough in their reviews of the licensees' radiation safety programs. The review team noted that all technical staff members are equipped with a cell phone for communication. Inspectors can contact the office immediately if there is a problem in the field. The inspectors can be reached anywhere in the State of Arkansas if the need arises. Overall, the technical performance of the inspectors was excellent, and their inspections were adequate to assess radiological health and safety at the licensed facilities.

The Section maintains a sufficient number and variety of survey instruments to perform radiological surveys of licensees. The review team examined the staff's instrumentation and observed that the survey instruments were calibrated and operable. Inspectors are assigned calibrated instruments for their routine use. The staff perform their own calibration of survey meters at least annually, with a source that is National Institute of Standards and Technology traceable.

The Section staff receive support from the Arkansas Department of Health Radiochemistry Laboratory, which performs sample counting and assay services. Discussions with Section staff established that the support is timely and dependable. The review team toured the laboratory facilities and discussed laboratory procedures and instrument quality control with the laboratory supervisor. The laboratory is capable of providing accurate and defensible analysis results to support the staff's needs.

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

### 3.3 Technical Staffing and Training

Issues central to the evaluation of this indicator include the Department'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 Department's questionnaire responses relative to this indicator, interviewed Department management and staff, reviewed job descriptions and training records, and considered any possible workload backlogs.

Under the recent reorganization, the Section has direct responsibility for the Agreement materials program. The review team found that the Section has 6 full-time technical positions, including the Program Leader, devoting approximately 5.2 FTE to the Agreement material program. The review team found that the Program Leader spends about 0.3 FTE of his time in

radioactive materials licensing and inspection activities, and 0.6 FTE in supervisory and administrative activities. The remaining five technical Health Physicist staff, spend about 0.8 FTE in administration, with a combined level of 3.5 FTE in radioactive material licensing and inspection activities. Currently, the Section has no vacant positions. As noted in Section 3.1, the Department was reorganized in FY2000 to a less hierarchal organization based on the team leader concept. The less hierarchal organization structure provides staff increased access to the Department 's State Health Officer, who reports directly to the Governor.

The review team learned that staffing has been relatively stable since December 1999. Prior to that time, and during the previous IMPEP review period, staffing turnovers impacted the program, resulting in considerable time spent training new staff. During the current review period, there were two new hires, and two inspection staff members departed. The team found that the Program Division Director retired in July 2001. The Section management informed the team that the Program Division Director position was subsequently abolished as part of the reorganization to a less hierarchal organizational structure. As a result of the reorganization the Section lost two staff positions. The review team also learned that the Department recently hired the retired Program Division Director, as a consultant, on a part-time short-term base, (for 20 hours per week). The Section management indicated that the consultant contract is renewable on a six month basis, based on available funds.

As a result of the increased stability in staffing since 1999, the Section currently has well trained experienced personnel to carry out regulatory duties. The review team found that the technical quality of staff products is high. Monthly staff training meetings include discussions of major licensing and compliance issues. The review team also found a significant licensing renewal backlog pending since the 1995 and 1998 program reviews. The backlog involves approximately one-half of the Section's licensees, indicating an imbalance in the current staffing plan between licensing and inspection activities. Section management indicated they have focused resources on inspections to ensure that potential health and safety issues resulting from the licensing renewal backlog are identified and addressed. Although the team found that the consultant has begun working on the licensing renewal backlog, the review team concluded that this effort alone would not address the licensing backlog actions in addition to any new licensing activities. The review team concluded that Department management should consider reviewing the current level of effort to maintain the current level of quality throughout the licensing and inspection program and address any backlogs. Additionally the team found that efficiencies could be achieved through automation of some licensing processes and standardized model templates. The review team recommends that Department management review the current staffing plan to achieve a more effective balance between licensing and inspection activities. This item is further discussed in Section 3.4.

The review team found that the minimum educational requirement for a new hire is a bachelor's degree and preferably 1-2 years of experience or equivalent training and experience. Two current staff exceed or meet the educational and experience qualifications including a bachelors degree and three staff meet the qualifications through a combination of training and equivalent experience.

The review team found that five of the six Section staff, including the Program Leader are fully qualified and one staff member is interim qualified. All technical staff members have taken the NRC courses deemed appropriate for their assigned tasks. In addition, the review team noted that new licensing and inspection staff members usually attend three to four NRC training

courses, including the five week health physics course, in their first two years with the Section, depending on availability of training courses and training funds.

The review team found that although all but one of the current staff are fully qualified, the training and qualification requirements for licensing and inspection staff have not been formally established in a policy or procedure and were not captured in a tracking system. The review team was provided a copy of a memorandum qualifying one staff member for radioactive material inspections, that identified completed training courses, and inspections and accompaniments used to support the qualification; although similar qualification documents were not available for all members of the staff. Based on discussions with the Program Leader, inspector requirements include NRC, or equivalent, training courses when available. The team was provided with copies of training certificates for some staff members. The Program Leader stated that inspectors are also required to be accompanied by a senior staff member on an inspection prior to authorizing the inspector to perform an independent inspection. The Program Leader also indicated that prior experience in inspecting in a specialized area is preferred for new license reviewers. The review team discussed the issue of formally documenting the training and qualification process to facilitate training and qualification of new staff, and periodic retraining of current staff. Guidance on training and qualification requirements are provided in the NRC/Organization of Agreement States Training Working Group Recommendations for Agreement State Training Programs report, and NRC IMC 1246.

The review team noted that the Section receives approximately 23.4% of its funding through a licensee fee program and the balance through general funds. The team learned that the Department has approved a request for development of a General License registration program, and plans to seek approval from the State Legislature for this additional activity. The Department has also approved a request for an increase in the licensee fee program, and plans to seek approval from the State Legislature. The team noted that although the Department has authority to issue civil penalty fines, Section management indicated it has never implemented it's authority in this area due to the rather cumbersome process.

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

### 3.4 Technical Quality of Licensing Actions

The review team interviewed license reviewers, evaluated the licensing process, and examined licensing casework for 15 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, financial assurance, operating and emergency procedures, appropriateness of the license conditions, and overall technical quality. The casework files were also reviewed for timeliness, use of appropriate deficiency letters and cover letters, reference to appropriate regulations, product certifications, supporting documentation, consideration of enforcement history, pre-licensing visits, supervisory review as indicated, and proper signatures. The files were checked for retention of necessary documents and supporting data.

The licensing casework was selected to provide a representative sample of licensing actions that were completed during the review period. The sampling focused on the State's new licenses,

amendments, renewals, and licenses terminated during the review period. The sampling included the following types: academic, broad medical, research and development, industrial radiography, portable and fixed gauges, institutional nuclear medicine, private clinics, radioisotope and sealed source radiotherapy, and a large irradiator facility. Licensing casework activities reviewed included, 4 new actions, 5 renewals, over 50 amendments contained in 15 case files, and 1 termination file. The Section completed a total of 1175 licensing actions from January 1999 through August 2002, that included 1073 amendments. A list of licenses reviewed with case-specific comments for license reviews can be found in Appendix D.

Of the 265 active licenses, 121 licenses have been in timely renewal status for more than one year, and 57 of these 121 renewal applications have been in timely renewal for four or more years. The review team found that staff has recently begun processing renewals received in 1997, and several license expiration dates were administratively extended for 1-2 years during 1999-2000. This issue was discussed during the 1995 and 1998 IMPEP reviews. The Program Leader indicated they have focused resources on inspections to ensure that potential health and safety issues resulting from the licensing renewal backlog are identified and addressed. Due to the licensing renewal backlog, the review team encountered difficulty finding renewals completed during the review period that provided a representative sampling of licensed activities and license reviewers. The team found that the majority of the correspondence covering license tie-down conditions dated back to 1992 and 1993. Recently renewed licenses contained corresponding tie-down conditions dating back to 1995 and 1996. The Section did not have a backlog of amendments, which are usually processed within seven days.

The review team learned that staff routinely hand delivers new licenses. The staff considers hand delivery of licenses to be a pre-licensing visit. The visit is documented on a one-page form. License files included all current inspection data, in addition to incident data, providing license reviewers with incident reports and inspection reports during the renewal period. Incidents are cross-referenced in licensing files.

In discussions with management, it was noted that there were no major decommissioning efforts underway with regard to Agreement material in Arkansas and the State is not a certifying entity for industrial radiographers but will accept certification from other certifying entities.

License reviewers have adequate supporting information and documentation readily available in the file to complete renewal license reviews. Monthly staff training meetings include discussions of major licensing and compliance issues.

Application packages containing guidance are sent to license applicants. The applications are reviewed following standard procedures that are similar to those used by the NRC. The licensing guidance, as well as other applicable guidance from NRC, are available, although staff has not had time to convert references to NRC regulations to Arkansas regulations. At the time of the 1998 IMPEP, the Program Leader indicated that they had a management Action Plan to address the recommendation to update licensing guidance documents and revise checklists used for license reviews. The 1998 IMPEP recommended several specific activities that should be included in the revised licensing checklists, such as addressing comprehensive radiation protection program reviews, annual program audits, and the need for financial assurance. The review team found that the program had partially implemented the Action Plan and addressed the 1998 IMPEP recommendation, in part, through individual reviewers adding activities to the

licensing checklist form, on a case-by-case basis. The team found that the program was using essentially the same licensing guidance documents that were used during the 1998 IMPEP review.

At the time of the review, the Section did not track amendment requests received to compare against completed amendment requests. While each license reviewer maintains a paper log of amendment assignments, there is no integrated Section tracking system in place. The current manual process does not provide the Section management with any measures to determine if program and timeliness standards are achieved.

Overall, the review team found that the licensing actions were thorough, complete, consistent, and of acceptable quality with health and safety issues properly addressed. License tie-down conditions were stated clearly, and were backed by information contained in the file, and inspectable. The licensee's compliance history was taken into account when reviewing renewal applications and amendments. Some amendments issued were a result of compliance issues found during inspections because the licensee had submitted changes to their program or possession limits in the renewal application, which had not been processed. Until the renewal backlog is reduced, these amendments are expected to increase as the approved radiation protection programs become more outdated.

The license reviewer reviews licenses and the Program Leader performs a technical review and supervisory review on all licensing actions. As of March 2002, two senior licensing reviewers have been authorized to also perform the technical and supervisory review on other reviewers work on an as needed basis. Only these three individuals have signature authority for the Section. This authority is designated in writing. All licenses are signed by the Program Leader or, on an as needed basis, by an individual who has signature authority.

The review team found that, during the review period, termination actions were well documented, showing appropriate disposal methods and records, confirmatory surveys, and survey records.

The review team recommends that Department management develop and implement an action plan to reduce the licensing renewal backlog. In support of this effort, the team encourages a review of the Section's business processes, which could include the examination of: an office wide tracking system for all licensing actions to include renewals, new actions and amendments; development of standard license templates and standard license condition templates and models. The review team recommends completion of revisions to update licensing guidance documents and checklists (this item was identified in the 1998 IMPEP review). In their response to the draft IMPEP report, the Department commented that they have implemented a centralized tracking system for licensing actions.

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

### 3.5 Response to Incidents and Allegations

In evaluating the effectiveness of the Section's actions in responding to incidents, the review team examined the Section's responses to the questionnaire relative to this indicator, reviewed the incident reports for Arkansas in NMED against those contained in the Section's files, and

evaluated reports and supporting documentation for eleven incidents. A list of the incident casework examined with case-specific comments is included in Appendix E. The review team also reviewed the Section's response to four allegations involving radioactive material. The NRC did not refer any allegations to the program during the review period.

The incidents selected for review included the following categories: misadministrations, stolen gauges, overexposures, equipment failure, and damaged equipment. The review team found that the Section'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 Section dispatched inspectors for onsite investigations when appropriate, and took appropriate enforcement and follow-up actions.

The responsibility for initial response and follow-up actions to materials incidents may be assigned to any member of the Section. Upon receipt, Section staff reviews a report, decides on the appropriate response, and logs it into the incident log. Documentation related to an incident is placed in the appropriate license file.

The review team identified 23 incidents in NMED for Arkansas during the review period and reviewed 11 case files. As noted in Section 2.0, the Section has adopted a procedure providing that reports of incidents that require immediate notification to the State be provided to the NRC within 24 hours of notification, and that reports of incidents that require notification to the State within 30 days be provided to the NRC monthly. The review team noted that all significant events (requiring 24 hour notification) were provided on a timely basis. Routine events and/or event updates (requiring 30-60 day notification) were reported to the NRC on a monthly basis since the previous IMPEP review in accordance with STP Procedure SA-300, "Reporting Material Events." The review team noted that the Section was generally responsive in providing requested followup information to the NMED contractor. The team noted that the Section was using the NMED Agreement State data entry program to provide event information to the NMED contractor.

The Section received and was using the latest NMED software by one staff member who had completed the new Microsoft Access 2000 NMED software training. The Section staff indicated that the NMED training was very helpful and that the latest version of the NMED software is an improvement over the older version, and is very user-friendly. The Section uses the NMED software to track all radioactive material incidents.

In evaluating the effectiveness of Arkansas' actions responding to allegations, the review team examined the Section's questionnaire responses relative to this indicator. The casework for four allegations reported directly to the State were reviewed. The Section evaluates each allegation and determines the proper level of response. The review of the casework and the Section files indicated that the Section took prompt and appropriate action in response to the concerns raised. All of the allegations reviewed were adequately documented and appropriately closed, with one remaining open due to an ongoing legal investigation. The review team also noted that allegations were treated and documented separately from the licensing and incident files, similar to the NRC system. There were no performance issues identified from the review of the casework documentation.

The review team noted that Arkansas law requires that all public documents be made available for inspection and copying unless specifically exempted from disclosure under the State's Freedom of Information laws. The State makes every effort to protect an allegeder's identity, but it

cannot be guaranteed. During the initial telephone contact, the allegor is advised that their anonymity cannot be guaranteed.

Based on the IMPEP evaluation criteria, the review team recommends that Arkansas' performance with respect to the indicator, Response to Incidents and Allegations, 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) Legislation and Program Elements Required for Compatibility; (2) Sealed Source and Device Evaluation Program; (3) Low-Level Radioactive Waste Disposal Program; and (4) Uranium Recovery Program. Arkansas' Agreement does not authorize regulation of sealed source and device evaluation and uranium recovery activities, so only the first and third non-common performance indicators were applicable to this review.

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

###### 4.1.1 Legislation

Along with the Section's response to the questionnaire, the staff provided the review team with the opportunity to review copies of legislation that affects the radiation control program. Legislative authority to create the program and enter into an Agreement with the NRC was granted in 1963. The Arkansas Department of Health is designated as the State's radiation control agency. The currently effective statutory authority for the Department is contained in "Arkansas Code of 1987 Annotated, Volume 20A, Title 20, Chapter 21." The legislative statute authorizing a Low-Level Waste Program is the "Arkansas Code of 1987 annotated, Volume 6A, Title 8, Chapter 8." The review team noted that the legislation, except for appropriation legislation, had not changed since the previous IMPEP review.

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

The State regulations for control of radiation are located in the Rules and Regulations for Control of Sources of Ionizing Radiation of the Arkansas State Board of Health and apply to ionizing radiation, whether emitted from radionuclides or devices. Arkansas requires a license for possession and use of radioactive materials, including naturally occurring and accelerator-produced radionuclides. A copy of the effective Arkansas regulations, including the last amendments which became effective as of July 1, 2002, was given to the review team.

The review team examined the procedures used in the State's rule-making process and found that the public and other interested parties are offered an opportunity to comment on proposed regulation changes. Rule-making responsibility is assigned to the Radiation Control and Emergency Management Team. It was noted that draft regulations were sent to the NRC for review and comment, and when necessary, the NRC comments were incorporated. The package of proposed regulations prepared by the Department, requires review by the Arkansas Legislative Council and approval from the State Board of Health. The State has emergency rule capability, if public health and safety are at risk. It was noted that the State's rules and regulations are not subject to "sunset" laws.

The review team evaluated the Department responses to the questionnaire, 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 Data Sheet. Since the previous IMPEP review, the Department adopted 17 regulation amendments in one rule package that became effective July 1, 2002.

The Department has not addressed the regulation "Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material," (65 FR 79162) parts of which were due for adoption by the Agreement States by August 16, 2001. However, the Team Leader stated that currently there are no Arkansas licensees authorized to distribute generally licensed devices. The Department stated that they could use legally binding requirements to enforce this rule if a licensee was authorized to distribute generally licensed devices. The remaining portions of the regulation are due by February 16, 2004.

The State has no overdue regulations required for compatibility. The Department will need to address the following four regulations in upcoming rule makings or by adopting alternate legally binding requirements:

- "New Dosimetry Technology," 10 CFR Parts 34, 36, and 39 amendments (65 FR 63749) that became effective January 8, 2001.
- "Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material," 10 CFR Parts 30, 31 and 32 amendments (65 FR 79162) that became effective February 16, 2001.
- "Revision of the Skin Dose Limit," 10 CFR Part 20 amendment (67 FR 16298) that became effective April 5, 2002.
- "Medical Use of Byproduct Material," 10 CFR Parts 20, 32 and 35 (67 FR 20249) amendments that became effective on October 24, 2002.

Based on IMPEP evaluation criteria, the review team recommends that Arkansas' performance with respect to the indicator, Legislation and Program Elements Required for Compatibility, 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 existing Agreements prior to 1981 were determined to have continued LLRW disposal authority without the need of an amendment. Although the Arkansas 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 Arkansas. Accordingly, the review team did not review this indicator.

## 5.0 SUMMARY

As noted in Sections 3 and 4 above, Arkansas' performance was found to be satisfactory for all six performance indicators. Accordingly, the review team recommended and the MRB concurred in finding the Arkansas Agreement State program 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 recommended and the MRB concurred that the next full review should be in approximately four years.

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

1. The review team recommends that Department management review the current staffing plan to achieve a more effective balance between licensing and inspection activities. (Section 3.3)
2. The review team recommends that Department management develop and implement an action plan to reduce the licensing renewal backlog. (Section 3.4)
3. The review team recommends completion of revisions to update licensing guidance documents and checklists (this items was identified in the 1998 IMPEP review).

## LIST OF APPENDICES AND ATTACHMENTS

Appendix A	IMPEP Review Team Members
Appendix B	Arkansas Organization Charts
Appendix C	Inspection Casework Reviews
Appendix D	License Casework Reviews
Appendix E	Incident Casework Reviews
Attachment	November 8, 2002 Email from Jared Thompson Arkansas Response to Draft IMPEP Report

## APPENDIX A

### IMPEP REVIEW TEAM MEMBERS

<b>Name</b>	<b>Area of Responsibility</b>
Patricia Larkins, STP	Team Leader Technical Staffing and Training Response to Incidents and Allegations
Vivian Campbell, Region IV	Status of Materials Inspection Program Legislation and Program Elements Required for Compatibility
Jamnes Cameron, RIII	Technical Quality of Inspections Inspection Accompaniments
Michael Stephens, Florida	Technical Quality of Licensing Actions

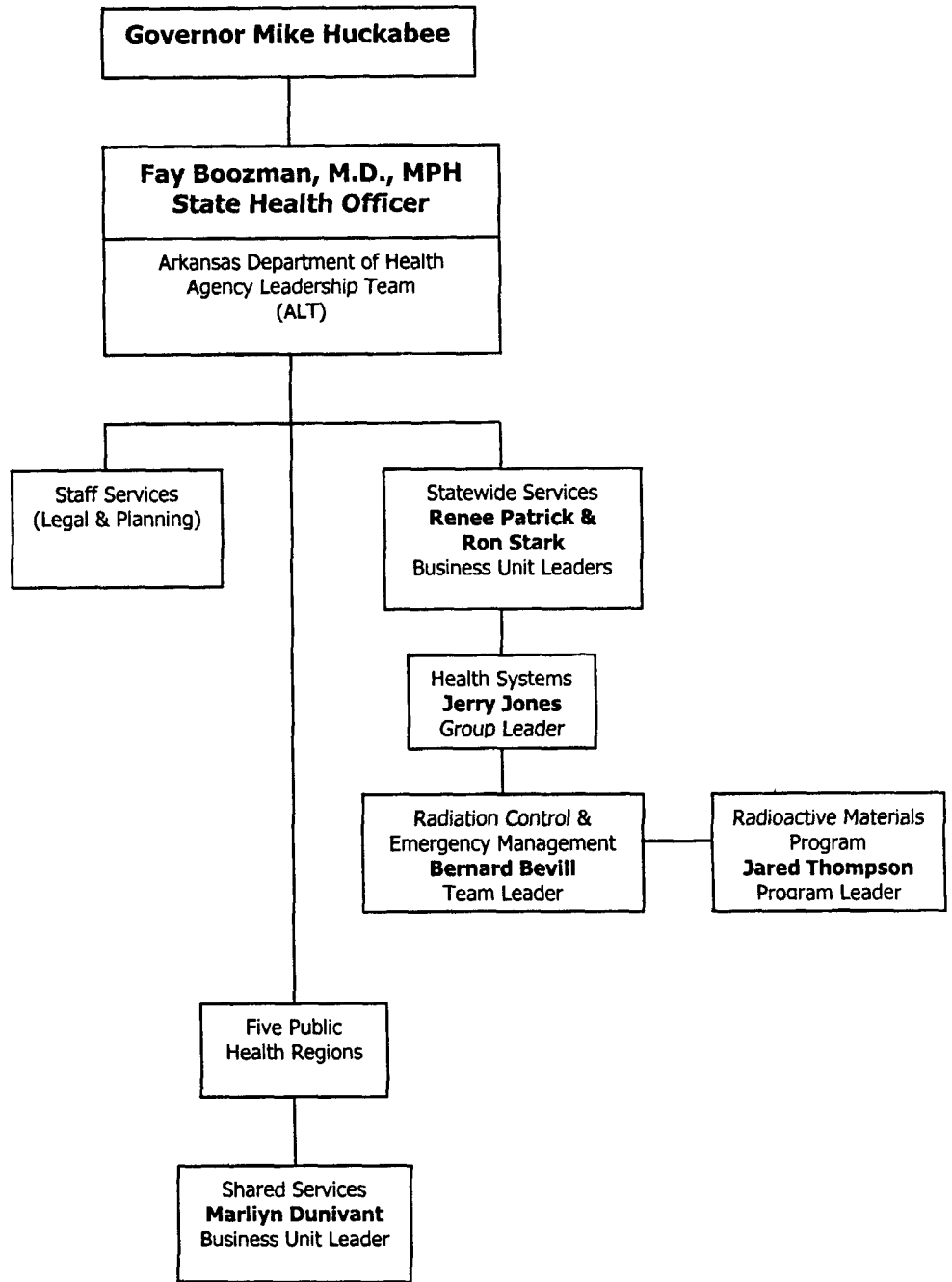
APPENDIX B

ARKANSAS DEPARTMENT OF HEALTH

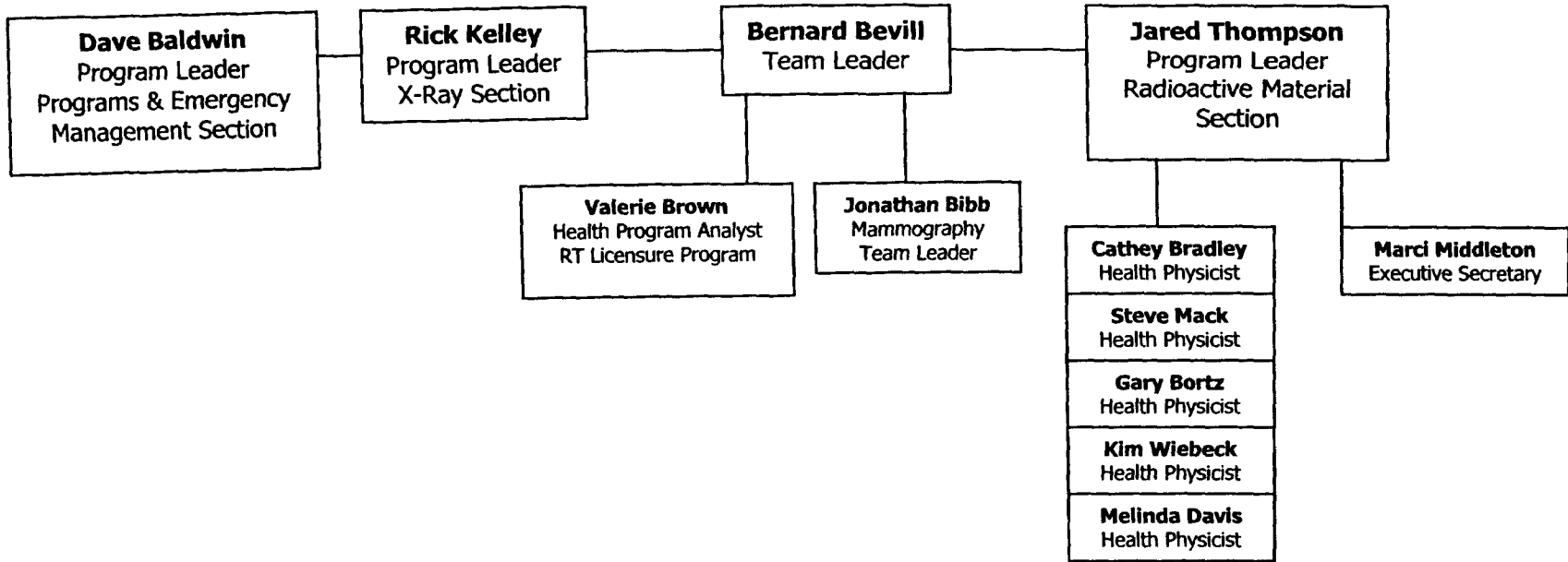
ORGANIZATION CHARTS

ML022890342

# ARKANSAS DEPARTMENT OF HEALTH Organizational Chart



## RADIATION CONTROL AND EMERGENCY MANAGEMENT TEAM ORGANIZATION CHART



**From:** Jared Thompson <jwthompson@HealthyArkansas.com>  
**To:** "pml@nrc.gov" <pml@nrc.gov>, "lrj2@nrc.gov" <lrj2@nrc.gov>  
**Date:** 11/8/02 4:10PM  
**Subject:** Draft IMPEP Report

Pat,

Attached are our comments to the IMPEP Draft Report letter dated October 23, 2002. As we discussed by phone, there are no disagreements with the content within the report. If you have any questions, please contact me at 501-661-2173.

Look forward to seeing you at the MRB.

Jared W. Thompson, Program Leader  
Radioactive Materials Programs  
Radiation Control & Emergency Management  
Arkansas Department of Health  
4815 W. Markham, Slot 30  
Little Rock, Arkansas 72205  
501-661-2173            501-661-2849 (FAX)

---

Outgoing mail is certified Virus Free.  
Checked by AVG anti-virus system (<http://www.grisoft.com>).  
Version: 6.0.410 / Virus Database: 231 - Release Date: 10/31/2002

**CC:** Bernard Bevill <brbevill@HealthyArkansas.com>, Cathey Bradley <clbradley@HealthyArkansas.com>, Gary Bortz <gbortz@HealthyArkansas.com>, Kim Wiebeck <kwiebeck@HealthyArkansas.com>, Marci Middleton <mmiddleton@HealthyArkansas.com>, Melinda Davis <mcdavis@HealthyArkansas.com>, Steve Mack <smack@HealthyArkansas.com>



**ARKANSAS DEPARTMENT OF HEALTH  
RADIATION CONTROL & EMERGENCY MANAGEMENT  
RADIOACTIVE MATERIALS PROGRAM**

**COMMENTS ON DRAFT IMPEP REPORT  
DATED OCTOBER 23, 2002**

- Page 1** Department Organization – Paragraph 3
- “The Group Leader reports to the Statewide Services Leaders who reports directly to a seven member Agency Leadership Team,”
- Page 6** License Type Clarification – Paragraph 2
- The identified academic license was not a broad scope. This should also be changed on page C.6. Inspection Casework Reviews under File Number 23 and Accompaniment Number 1.
- Page 10** Technical Quality of Licensing Actions – Paragraph 2
- Please change the wording regarding the Section tracking system. Effective October 1, 2002, the Program implemented a central tracking system for licensing actions. We are also requesting that Recommendation Number 3 on Page 14 be removed from the Draft Report because this recommendation has been implemented.
- Page D.4.** License Casework Reviews – File Number 13; Comment d.
- An amendment was issued to the licensee identifying the oncologists as the only approved authorized users. This amendment also requires a three-person treatment team consisting of the neurosurgeon, approved medical physicist and an authorized user to be physically present during patient treatment.
- I have talked with Mike Stephens of Florida and he agreed that this was acceptable. Please remove from the Draft Report.
- Page E.1.** Incident Casework Reviews – File Number 2
- Documentation for the licensee stated that during this incident the radiographer was always present. The radiographer did not leave the work site to contact the RSO. The Department interviewed the radiographer and accepted his statement as an indication of compliance with the two-man rule. This was not identified in NMED because there was no violation regarding the two-man rule nor did it have any affect on the outcome of the incident.
- Page E.2.** Incident Casework Reviews – File Number 4
- This incident was closed out on November 12, 2002.



# Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000  
Fay W. Boozman, MD, MPH, Director  
Mike Huckabee, Governor

To: Lohaus, STP

January 14, 2003

cys: EDO  
DEDMRS  
DEDR  
DEDM  
AO  
RIV

Carl J. Paperiello, Executive Director  
Materials, Research and State Programs  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, Maryland 20852

Dear Dr. Paperiello:

I was pleased to receive your letter dated December 20, 2002, concerning the evaluation of the Department's Radioactive Materials Program. The positive findings and results from the Integrated Materials Performance Evaluation Program (IMPEP) review are very much appreciated. The results reflect the Department's commitment to excellence in the protection of public health.

The Radioactive Materials Program has revised procedures and implemented changes to address the recommendations made in the IMPEP final report. The Program has also developed a plan to achieve a more effective balance between licensing and inspection activities. The plan will be beneficial in improving the effectiveness and excellence of the Radioactive Materials Program.

I would like to thank the NRC for the support, assistance and guidance provided to the Radioactive Materials Program. We look forward to our agencies continuing to work cooperatively in the protection of public health.

Sincerely,

Fay W. Boozman, M.D., MPH, Director  
Arkansas Department of Health

Cc: Bernard Bevill, Work Unit Leader  
Radiation Control & Emergency Management

Jared Thompson, Program Leader  
Radioactive Materials Program

*Keeping Your Hometown Healthy*

"An Equal Opportunity Employer"

Template: EDO-001

E-RIDS: EDO-01