DATED: JULY 8, 1998 SIGNED BY: HUGH L. THOMPSON, JR.

Sandra B. Nichols, M.D.
Director
Arkansas Department of Health
4815 West Markham Street
Little Rock, AR 72205-3867

Dear Dr. Nichols:

On June 16, 1998, 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 NRC's program.

Section 5.0, page 14, of the enclosed final report presents the IMPEP team's recommendations and suggestions.

Based on the results of the current IMPEP review, the next full review will be scheduled in 4 years, unless program concerns develop that require an earlier evaluation.

I appreciate the courtesy and cooperation extended to the IMPEP team during the review and your support of the Radiation Control Program. I look forward to our agencies continuing to work cooperatively in the future.

Sincerely,

Hugh L. Thompson, Jr.
Deputy Executive Director
for Regulatory Programs

Enclosure:
As stated

cc: David D. Snellings, Jr., Director
Division of Radiation Control and
Emergency Management
Arkansas Department of Health

Gerry Hill, Director
Bureau of Environmental Health Services
Arkansas Department of Health

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bcc: Chairman Jackson
Commissioner Diaz
Commissioner McGaffigan

Distribution: See next page.

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF ARKANSAS AGREEMENT STATE PROGRAM

March 23-27, 1998

FINAL REPORT

U.S. Nuclear Regulatory Commission

1.0 INTRODUCTION

This report presents the results of the review of the Arkansas radiation control program. The review was conducted during the period March 23-27, 1998 by a review team comprised of technical staff members from the Nuclear Regulatory Commission (NRC) and the Agreement State of Oregon. Review 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 25, 1997, revised NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period May 26, 1995 to March 27, 1998, were discussed with Arkansas management on March 27, 1998.

A draft of this report was issued to Arkansas for factual comment on May 1, 1998. The State responded in a letter dated May 26, 1998. The Management Review Board (MRB) met on June 16, 1998 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 Division of Radiation Control and Emergency Management (the Division) in the Bureau of Environmental Health Services of the Arkansas Department of Health. Organization charts for the Arkansas Department of Health and the Division of Radiation Control and Emergency Management are included as Appendix B.

At the time of the review, the Arkansas program regulated 262 specific licenses, including limited and broad scope medical institutions, academic institutions, industrial radiography, fixed and portable gauge units, and nuclear pharmacy licensees.

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 State on January 9, 1998. The State provided a response to the questionnaire on February 20, 1998.

The review team's general approach for conduct of this review consisted of: (1) examination of Arkansas' response to the questionnaire; (2) review of applicable Arkansas statutes and regulations; (3) analysis of quantitative information from the Division licensing and inspection data base; (4) technical review of selected licensing and inspection actions; (5) field accompaniments of three Arkansas 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 criteria for each common and applicable non-common performance indicator and made a preliminary assessment of the Division's performance. The review team also considered a self-evaluation conducted by the program and associated action plans developed for identified issues.

Section 2 below discusses the State's actions in response to recommendations made following the previous review. Results of the current review for the IMPEP common performance indicators are presented in Section 3. Section 4 discusses results of the applicable non-common performance indicators, and Section 5 summarizes the review team's findings, recommendations, and suggestions. The review team identified the self-evaluation as a good practice in the program. Recommendations made by the review team are comments that relate directly to program performance by the State. A response is requested from the State to all recommendations in the final report. Suggestions are comments that the review team believes could enhance the State's program. The State is requested to consider suggestions, but no response is requested.

2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

During the previous routine review, which concluded on May 26, 1995, five comments were made and the results transmitted to Dr. Sandra B. Nichols, Director, Arkansas Department of Health on August 7, 1995. The team's review of the current status of these recommendations is as follows:

(1) At the time of the May 1995 program review, compatibility was withheld because the State had not adopted three regulations. We recommended that the State adopt the three regulations listed below.

(a) "Safety Requirements for Radiographic Equipment," 10 CFR Part 34 amendment, which was to be adopted by January 10, 1994;

(b) "Package Opening Procedures," 10 CFR Part 20 amendment, which was to be adopted by January 1, 1994; and

(c) "Notification of Incidents," 10 CFR Parts 20, 30, 31, 34, 40, and 70 amendments, which were to be adopted by October 15, 1994.

Current Status: This recommendation is closed. The review team examined the Division's regulations due for adoption at the time of this review. The review team found that the State had adopted and implemented all NRC amendments required for compatibility.

(2) We recommended that the program's management and staff examine and take action to reduce the licensing backlog.

Current Status: This recommendation is closed. Licensing backlogs are not a part of the IMPEP review criteria for Agreement States. The Division has conducted a self-evaluation which identified ways to expedite licensing actions and address those with potential health and safety consequences.

(3) We recommended that the Division staff review its medical licenses to clearly determine whether or not the 1982 procedure, which allowed exemption from the required survey of packages received from nuclear pharmacies, has been used. Any

license conditions that exempt medical licensees from receipt surveys should be deleted to assure that surveys of nuclear pharmacy packages will be conducted. Current Status: This recommendation is closed. The Division is no longer permitting this exemption for its medical licensees. The review team based its finding on reviews of selected medical license files, inspection reports, the State's 10 CFR Part 20 equivalent regulations and discussions held with the Division staff.

(4) We recommended that the State develop written escalated enforcement procedures so that program managers and staff all become familiar with the options available for achieving regulatory compliance under current State policy.

Current Status: This recommendation is closed. As a result of the Division's self-evaluation effort, the staff developed an updated escalated enforcement procedure which became effective during the week of the IMPEP review.

(5) We recommended that the program consider an increase in the number of inspections conducted under reciprocity.

Current Status: This previous report recommendation is administratively closed. Section 3.1, below, contains a similar recommendation made as a result of the current program review. As a result of the Division's self- evaluation effort, an Action Plan was developed to revise compliance inspection procedures to improve the routine inspection of reciprocity licensees.

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 this indicator: (1) inspection frequency, (2) overdue inspections, (3) initial inspections of new licenses, and (4) timely dispatch of inspection findings to licensees. The review team's evaluation is based on Arkansas' questionnaire responses relative to this indicator, data gathered independently from the State's licensing and inspection data tracking system, the examination of completed inspection casework, and interviews with the Division Director, the Compliance Section Supervisor, and the inspection staff.

The IMPEP team's review of the Division's inspection priorities found that the inspection frequencies for various types of Arkansas licenses are established by the Licensing, Accreditation and Registration Section Supervisor and are based upon the type of license. The Division's priorities are 1 through 4 years for an inspection interval. In comparison with NRC guidance, the Division's assignment of inspection priorities was determined to be at least as frequent as NRC'S Inspection Manual Chapter (IMC) 2800. The review team did not identify any inspections, over the review period, as exceeding the IMPEP guidelines.

The Division has provisions to extend or shorten the interval between inspections based upon the evaluation of licensee performance. This action requires the Division Director's authorization. Interviews determined that the extension for good licensee performance was used once in the review period. The Division uses a reduced inspection frequency as a tool to encourage improved licensee performance. The Division staff reported that, on average, one licensee per quarter has its inspection interval shortened due to poor performance. The Compliance Section Supervisor reviews the inspection data and determines if a recommendation to extend or reduce the inspection frequency is warranted. The review team notes that extending inspection frequency intervals could provide some workload relief and allow staff to pursue existing projects. After evaluating the type and quantities of licensed materials used, the Division believes that its one to four year inspection interval prioritization procedure produces the best compliance with the proper mix of enforcement, inspection and licensing.

The normal interval between inspection and report issuance was found to be 7 to 10 working days, and no report letter was identified as being more than 30 days post-inspection. Reports and letters are produced by the secretarial staff based upon a set paragraph guidance document, or may be produced by the technical staff directly.

The Division possesses a database for inspection scheduling. During the review, the IMPEP team was provided with various lists, including: licenses due for a particular period, inspections conducted, reports issued, and reciprocity licensee names and inspections. The review team noted that there were 33 new licenses issued during the review period. The Division requires that new Priority 1 licensees receive an initial inspection within 3 months of license issuance. All other priorities of new licenses are initially inspected at 6 months. During the review period four licensees were identified as being overdue for inspection. All four licensees were Priority 3 industrial gauge users, three of which were overdue by 2 months and the fourth was overdue by 1 month. These four inspections were scheduled for completion in April 1998.

During the previous review, a recommendation was made that the State develop written escalated enforcement procedures, including civil penalties, for non-compliant licensees. The Division currently uses a Management Meeting with the licensee as one of several escalated enforcement tools. Division managers believe that this technique has proven effective in focusing the licensee's attention on corrective actions. The Division has in the past used its authority to suspend or revoke licenses. The review team noted that, as a result of the Division's self-evaluation effort, the staff developed an updated escalated enforcement procedure. The updated procedure became effective during the week of the IMPEP review, and therefore, it was not reflected in compliance case files examined for the review period. A specific procedure addressing civil penalties is currently being developed. The review team recommends that the Division continue to develop and implement the civil penalty portion of the updated escalated enforcement procedure in order to enhance its compliance program.

Arkansas Rules and Regulations for Control of Sources of Radiation, Section RH-750, authorizes NRC and other Agreement State licensed persons a general license to work for any 180 days in any 12-month period, upon provision of 2 days notice. Inspection frequency for reciprocity licensees has been established by the Division in Procedure RAM-03.0, Procedure for Scheduling and Tracking RAM License Inspection, revised January 1988. The procedure

states that: (1) any licensee working in the State more than once per month will be inspected once each year; (2) every effort will be made to inspect licensees working in the State for 1 to 3 consecutive weeks; and (3) any licensee working in the State 4 or more consecutive weeks will be inspected. The review team determined that of the Priority 1 program codes in the registered database, the Division inspected 13% in 1995, 16% in 1996 and 18% in 1997. No service licensees reported any work which should have been inspected at the 100% frequency. No Priority 2, 3 or 4 licensees reported work in the State. Licensees that are classified as Priority 5 and higher (all others) by the NRC were inspected at a 10% frequency in 1995 and 1996, and at 25% in 1997. The Compliance Section Supervisor and the Division Director stated that the inspection frequencies used previously would be changed to those in IMC 1220. They also indicated that a more aggressive inspection campaign would be launched to obtain better compliance with both the regulations at RH-750 and the inspection priorities in IMC 1220.

Arkansas shows progress towards achieving the goals of IMC 1220, and coupled with the statements above, the review team recommends that the Division continue efforts to move its reciprocity inspection program towards the guidelines established in IMC 1220.

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 review team examined a selected sample of inspection reports, enforcement documentation, and inspection field notes and interviewed inspectors for 10 materials inspections conducted during the review period. The casework included five of the State's materials license inspectors, and covered inspections of various types including industrial radiography, medical institutions, academic institutions, fixed and portable gauging systems, and a nuclear pharmacy. Appendix C lists the inspection casework files reviewed for completeness and adequacy with case-specific comments.

During the week of March 2, 1998 and on March 24, 1998, a review team member accompanied all three of the State's inspectors on two inspections each of facilities licensed by the State. The inspection accompaniments are listed in Appendix C. The review team member determined that the inspectors conducted themselves in a professional manner, dealt fairly and accurately with licensee staff and management, and were well prepared for each inspection. The Division does not currently have network capability, but installation has been identified as a priority. The Division has recently acquired portable computers and intends to issue one to each inspector. The inspectors are equipped with, and used, appropriate and calibrated survey and safety equipment. The Division requires inspection staff to perform radiation measurements and obtain wipes for evaluation of possible removable contamination as a part of each inspection. The Division staff performed inspections with guidance adapted from IMCs from the early 1990s. The Director stated that, based on the Division's self-evaluation effort, there are plans in place for updating the guidance to that which is most current and based upon the current Arkansas regulations. The review team explained the current efforts in consolidating guidance in the NUREG-1556 series, and the in-process inspection guidance being developed as IMCs 87110 and beyond. Inspection field notes

generally are converted to a printed version. The licensee is sent a report cover letter with Notices of Violation and Comments included. The report is reviewed by the Compliance Section Supervisor. The review team recommends that the Division proceed expeditiously with its review and updating of inspection program guidance.

The State maintains an up-to-date well-staffed environmental radiochemistry laboratory, which analyzes samples obtained during inspections, follow-up actions, or licensing terminations. The laboratory participates in the routine EPA - Environmental Monitoring and Safety Laboratory (EMSL) cross-check program and is used routinely by inspectors taking wipe samples. Gamma spectroscopy QA/QC appears adequate with routine use of a NIST-traceable mixed gamma standard. The gamma spectroscopy system includes two 35% Intrinsic Germanium (INGE) detectors in copper-lined caves. The laboratory does not do direct alpha spectroscopy. They do, however, have the capability to analyze drinking water samples with their low background thin window gas flow proportional counter. Utilizing the Barium Sulfate precipitation method, as specified by the EPA, samples can be analyzed at the level of 4 pCi/liter.

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

3.3 Technical Staffing and Training

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

The Division Director identified nine individuals who provide 3.63 person-years of technical effort to the Division for the regulation of radioactive materials. This includes the Division Director, the Quality and Evaluation Supervisor, the Compliance Section Supervisor, the Licensing, Accreditation and Registration Section Supervisor, three compliance inspectors and two license reviewers. During the review period, the Division’s staff turnover, in the materials section, included the Director and three staff members. The Director left the Division to pursue Federal employment. Each of the three staff members, who left the Division, had personal reasons for leaving.

Based on the response to the IMPEP questionnaire and discussions with the Division Director, the review team noted that during the review period three technical staff left the radioactive materials program. These vacancies were promptly filled by three candidates who are well qualified based on their education and extensive work experience in radiological science. There are currently no vacancies in the radioactive materials program. The three new staff members have bachelor’s degrees and numerous specialized course-work in radiological science. Based on a review of the Division position descriptions and the resumes of the new staff, the review team noted that these individuals exceeded the minimum requirements for their positions.

During the review period, the division also filled the vacant Director's position. The new Director is a former member of the Division staff who left the program in 1980 and has returned after several years of private sector employment. The Director holds a Master's degree in Health Physics and is certified by the American Board of Health Physics in comprehensive health physics and nuclear power plant health physics.

The review team noted that although the licensing backlog remains high, current staffing levels are adequate and no health and safety concerns attributable to staffing were identified. One possible cause for the licensing backlog is past chronic staff turnover.

The Division encourages all licensing and compliance staff to attend technical training courses. The State utilizes a list of training courses identical to IMC 1246. Each staff member is expected to successfully complete the core courses identified for materials inspectors and license reviewers in IMC 1246. Waivers from specific courses may be granted, at the Director's discretion, for individuals with extensive work experience and education in a specific topic area. There are currently three staff members in the radioactive materials program listed as being in training status. Based on their previous work experience, course availability and mentoring by senior staff, it is expected that they will achieve fully qualified status as inspectors in a short time. Staff who are fully qualified can independently inspect and license all activities regulated by the Division.

The Division maintains a database which lists the training received by individual staff members. A second database is used to track upcoming training and matches specific training courses with the appropriate staff.

The review team noted that the Division is conducting regular monthly in-house training for its staff. This training covers a variety of topics such as regulations, worker safety, and instrumentation. The training is conducted in the form of discussions, demonstrations, and videotape presentations. Documentation indicates that this training was initiated several years ago and is ongoing.

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 examined completed licensing casework and interviewed the reviewers for nine specific licenses. Licensing actions were evaluated for completeness, consistency, proper isotopes and quantities used, qualifications of authorized users, adequate facilities and equipment, and operating and emergency procedures sufficient to establish the basis for licensing actions. Licenses were reviewed for overall technical quality including accuracy, appropriateness of the license, its conditions, and tie-down conditions. Casework was evaluated for timeliness, adherence to good health physics practices, reference to appropriate regulations, documentation of safety evaluation reports, product certifications or other supporting documents, consideration of enforcement history on renewals, pre-licensing visits, peer or supervisory review as indicated, and proper signature authority. 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 had been completed in the review period. The cross-section sampling included four of the State's major licenses as identified by the State in Section 16 of the questionnaire, and included the following types: academic broad scope; industrial radiography; medical institutions; nuclear pharmacy; gauge; and an industrial laboratory. Licensing actions during the review period included 33 new licenses, 59 renewals, and 633 amendments (including 25 terminations), for a total of 725 licensing actions. In discussions with management, it was noted that there were no major decommissioning efforts underway with regard to agreement material in Arkansas, however, the State was required to evaluate contamination in a terminated licensee facility. A list of licenses reviewed with case-specific comments for license reviews can be found in Appendix D.

The licensing process was discussed with the primary license reviewer and staff. Types of licensing actions selected for review included new licenses, amendments to existing licenses, renewal licenses, and terminations. License reviews were well done, well-documented, detailed, and complete, with the exception that reviews did not specifically address annual audits of the radiation protection program or financial assurance. Reviews showed, however, that no licenses required financial assurance, and that the scope of the license review covered the essential elements expected in a comprehensive radiation protection program (actual radiation protection audits are addressed during inspections). Although license renewals often remain in timely renewal status for as long as 2 years, health and safety issues are adequately addressed in separate amendments to the deemed timely license or during regular compliance inspections.

All licensing actions receive supervisory review, and were signed by management. Deficiencies are addressed by detailed, well-written letters utilizing appropriate regulatory language. License reviewers rarely use telephone deficiencies.

The State uses detailed licensing checklists for renewals and new licenses. However, the checklists do not include radiation protection and financial assurance reviews as stated above.

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

Application packages containing guidance are sent to license applicants. The applications are reviewed following standard procedures which are similar to those used by the NRC. The Licensing guides, 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. A management Action Plan provided to the review team, however, showed that the State plans to update guidance used for license reviews. Staff typically uses Standard License Conditions (SLCs) similar to those used by NRC. Licenses are issued in entirety only as new licenses or during the renewal process. Amendments are issued only with changes as noted in the amendment request (1 or 2-page amendments). License files are two-part documents organized with the license and amendments separate from all other support documents, including application, deficiency letters, review check sheet, telephone documents, memoranda, hand-delivery license report, inspection reports, and licensee response letters on the other side. All documents are chronologically organized in the license file. There are two

complete files for each license. Files are organized by license number. A new license file is created during each five-year renewal process. The timely renewal letter resides in the expired license file, which, after the renewal is issued, is stored as an archive file (timely renewal letter was not with renewal license application). Compliance records are kept contiguous to licensing support documents. Reviewers are conscientious about including all pertinent documents in the license tie-down.

The Division staff routinely hand delivers new and renewal 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 have 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 one instance, a misadministration did not have complete supporting documentation in the license file. 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.

At the time of the review, the State did not have a centralized computer system for tracking licensing actions. Each license reviewer keeps a desk log of licensing actions received and reviewed. A central receipt log is kept where new license numbers are issued. There is a monthly report of licensing actions generated manually. The State did not have computers for materials licensing staff until fall of 1997; only licensing staff have networked computers. No licensing statistics are kept in computers at this time but the program plans to implement a database program within one year.

Management has high expectations of the staff and staff licensing products are very high quality; however, production has been limited by license staff turnover. Licensing casework backlogs remain high and were noted during the last program review. Continued effort should be made to reduce the licensing casework backlog. In spite of the foregoing, no health and safety concerns were identified. As a result of the program's self-evaluation, an Action Plan has been developed to update guidance, to expedite licensing actions, and to address those with potential health and safety consequences. The review team suggests that management continue to reevaluate progress and implement the Action Plan.

See recommendation in Section 4.2.3, Evaluation of Defects and Incidents Regarding SS&Ds, addressing evaluations for generic implications and communication of potential generic concerns to manufacturers and NRC.

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 State's actions in responding to incidents, the review team examined the State's response to the questionnaire regarding this indicator, reviewed selected incidents reported for Arkansas in the "Nuclear Material Events Database" (NMED) against those contained in the Arkansas files, and reviewed the casework and supporting

documentation for ten material incidents. There were no medical related events during the review period that met the definition of a misadministration. A list of selected incident files examined along with case specific comments is contained in Appendix E.

The review team interviewed the Division Director, the Licensing, Accreditation, and Registration Section Supervisor, the Quality and Evaluation Section Supervisor, and the Compliance Section Supervisor. The subject areas discussed with staff included the State's incident and allegation process, tracking system, file documentation, Freedom of Information Act, NMED, and notification of incidents to the NRC Emergency Operations Center.

When notification of an incident or an allegation is received, the Division Director, the Quality and Evaluation Section Supervisor, and the Compliance Section Supervisor normally meet to discuss the initial response and the need for an on-site investigation. A draft Emergency Response procedure in a checklist format is used as guidance to document the response to incidents.

The review team found that the State's actions were within the performance criteria, with the exception of incomplete documentation in two files reviewed, follow up of incidents in one file reviewed, and inconsistent notification of NRC in five files reviewed. Initial responses were prompt and well-coordinated, and the level of effort was commensurate with the health and safety significance. Inspectors were dispatched for on-site investigations when appropriate and the State took suitable corrective and enforcement action. However, the review team found that there is a need for better documentation in incident files in order to close-out incident investigations. An example of this is the Anderson Engineering case File No. 1 in Appendix E. The review team recommends that the State adequately document and closely follow the progress of investigations of incidents through close out.

The Division Director acknowledged the State has not consistently reported incidents to the NRC Operations Center for those that require immediate or 24-hour reporting by the State licensee. He advised that corrective actions, in the form of an Action Plan, developed as a result of the self-evaluation, are currently underway. He also indicated that the draft Emergency Response procedure has the requirement to notify the NRC incorporated into the checklist. The NMED system was discussed with the Division Director and the guidance contained in the "Handbook on Nuclear Event Reporting in the Agreement States" was reviewed. The review team noted the Commission's position that, under the Policy Statement on Adequacy and Compatibility of Agreement State Programs, it is mandatory for Agreement States to report events to the NRC. (It should be noted that those incidents not reported to NRC under NMED occurred before the September 3, 1997 publication date for this new policy.) The review team noted that one reportable event occurred since September 3, 1997, and the State made a prompt notification to NRC.

The review team recommends that the State continue to report events and participate in the 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."

During the review period, there were no allegations referred to the State by NRC nor were there any allegations that the State handled directly. The review team examined the

procedure that the Division utilizes for the handling of allegations and found that it was comprehensive. It was also noted that the Division advises allegers that they are not able to guarantee their confidentiality due to State law.

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 cover a uranium recovery program, so only the first three non-common performance indicators were applicable to this review.

4.1 Legislation and Program Elements Required for Compatibility

4.1.1 Legislation

Along with their response to the questionnaire, the State provided the review team with the opportunity to review copies of legislation that affects the radiation control program. The currently effective statutory authority for the Division is contained in "Arkansas Code of 1987, Title 20, Chapter 21." The Division of Radiation Control and Emergency Management is designated as the State's radiation control agency. The review team noted that the following legislation was passed during the review period:

- Act 796 of 1995 changes to the fee schedule to adjust for cost of living and to add several new fee categories.

- Act 768 of 1997 Arkansas Department of Health Appropriations Bill.

The currently effective statute authorizing a Low-Level Waste Program is "Arkansas Code of 1987 Annotated, Volume 6A, Title 8, Chapter 8." No other legislation was passed that affects the Division.

4.1.2 Program Elements Required for Compatibility

The Arkansas Regulations for Control of Radiation are found in the Rules and Regulations for Control of Sources of Ionizing Radiation of the Arkansas Board of Health and apply to all ionizing radiation, whether emitted from radionuclides or devices. Arkansas requires a license for possession, and use, of all radioactive material including naturally occurring materials, such as radium, and accelerator-produced radionuclides. Arkansas also requires registration of all equipment designed to produce x-rays or other ionizing radiations.

The review team examined the State's schedule for revising its regulations to maintain compatibility. The procedure used in the State's regulations promulgation process, and

detailed in their response to the IMPEP questionnaire, was discussed with the Division staff. Both the schedule and the procedure were found to be acceptable. The review team noted that ample opportunity is afforded to the public and the NRC to review and comment on proposed revisions to the Division's regulations. Comments are considered and incorporated as appropriate before the regulations are finalized. The last revision of the State's rules and regulations became effective on January 1, 1997. An Action Plan was developed based on the self-evaluation and a senior staff member was named as the project leader for the scheduled revision of the regulations which will begin in April 1998. The revision is expected to be completed in December 1998, and a revised regulation should become effective in January 1999. The current revision schedule should permit the Division to maintain regulations compatible with NRC's regulations. The State does have the authority to issue legally binding requirements (e.g., license conditions) in lieu of regulations until compatible regulations become effective.

The review team evaluated Arkansas' responses to the questionnaire and reviewed the regulations adopted by the State since the 1995 review to determine the status of the Arkansas regulations under the Commission's new adequacy and compatibility policy. The review team found that the State has adopted all regulations required for compatibility at the time of this review. There are a number of amendments to NRC's regulations which the State should adopt, within 3 years of the effective date, in order to maintain compatibility.

The Division has not yet adopted the following regulations, but intends to address them in a rulemaking or by adopting alternate generic legally binding requirements:

- "Performance Requirements for Radiography Equipment," 10 CFR Part 34 amendment (60 FR 28323) that became effective June 30, 1995.

- "Radiation Protection Requirements: Amended Definitions and Criteria," 10 CFR Parts 19 and 20 amendments (60 FR 36038) that became effective August 14, 1995.

- "Clarification of Decommissioning Funding Requirements," 10 CFR Parts 30, 40, and 70 amendments (60 FR 38235) that became effective November 24, 1995.

- "Compatibility with the International Atomic Energy Agency," 10 CFR Part 71 amendment (60 FR 50248) that became effective April 1, 1996.

- "Medical Administration of Radiation and Radioactive Materials," 10 CFR Parts 20 and 35 amendments (60 FR 48623) that became effective October 20, 1995.

- "Termination or Transfer of Licensed Activities: Record Keeping Requirements," 10 CFR Parts 20, 30, 40, 61, 70 amendments (61 FR 24669) that became effective June 17, 1996.

- "Resolution of Dual Regulation of Airborne Effluents of Radioactive Materials; Clean Air Act," 10 CFR Part 20 amendment (61 FR 65119) that became effective January 9, 1997.

- "Recognition of Agreement State Licenses in Areas Under Exclusive Federal Jurisdiction Within an Agreement State," 10 CFR Part 150 amendment (62 FR 1662) that became effective February 27, 1997.

- "Criteria for the Release of Individuals Administered Radioactive Material," 10 CFR Parts 20 and 35 amendments (62 FR 4120) that became effective May 29, 1997.

- Fissile Material Shipments and Exemptions," 10 CFR Part 71 amendment (62 FR 5907) that became effective February 10, 1997.

- "Licenses for Industrial Radiography and Radiation Safety - Requirements for Industrial Radiography Operations," 10 CFR Parts 30, 34, 71, 150 amendments (62 FR 28947) that became effective June 27, 1997.

- "Radiological Criteria for License Termination," 10 CFR Parts 20, 30, 40, 70 amendments (62 FR 39057) that became effective August 20, 1997.

It is noted that Management Directive 5.9, Handbook, Part V, paragraph (1)(c)(iii), provides that the above regulations should be adopted by the State as expeditiously as possible, but not later than 3 years after the effective date of the new Commission Policy Statement on Adequacy and Compatibility, i.e., September 3, 2000.

Based on the 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 Sealed Source and Device (SS&D) Evaluation Program

At the time of the review, Arkansas had no sealed source or device manufacturers nor were any applicants anticipated in the near future. There were no sealed source or sealed source device actions received or completed by the State during the review period. The Division Director and the Licensing, Accreditation, and Registration Section Supervisor, who is responsible for SS&D evaluations, were interviewed to determine the current status of the SS&D program. The Division Director indicated that the State is considering whether or not to relinquish the authority to regulate SS&D manufacturers.

The Division has all appropriate Standard Review Plans, ANSI standards, and other documents in place to perform SS&D evaluations.

It was noted that the Division has not yet adopted two regulations required for compatibility. Although adoption of NRC regulations in 10 CFR 30.32(g) and 32.210 is not required until September 3, 2000, the review team suggests that, for the purposes of compatibility, the State adopt the NRC regulations in 10 CFR 30.32(g) and 32.210. Sections 30.32(g) and 32.210(c) would need to be in place whether or not the Division maintains an SS&D evaluation program.

At the time the final report was issued, the Division staff reported that a letter was sent to the NRC Chairman from Arkansas Governor Huckabee formally requesting to relinquish authority to maintain a sealed source and device evaluation program.

4.2.1 Technical Quality of the Product Evaluation Program

No SS&D evaluations were conducted by Arkansas during this review period.

4.2.2 Technical Staffing and Training

The criteria for the IMPEP indicator SS&D evaluation program require that a minimum of two individuals be fully trained to conduct SS&D evaluations. The Division currently has only one individual who attended the NRC workshop on SS&D evaluations. Since Arkansas has requested to relinquish its authority to maintain a sealed source and device evaluation program, the review team did not recommend further training for the staff in this area.

4.2.3 Evaluation of Defects and Incidents Regarding SS&Ds

During the review, it was noted that one incident concerning a soil moisture density gauge was not well documented and was lacking in the degree of follow up (see Incident # 95-28 in Appendix E for detail). Furthermore, the review team noted that in two of the three incidents related to equipment failure, there was no indication that the licensee was required to perform a root cause analysis and no information on the potential for a generic design defect was forwarded to the manufacturer or the NRC. This issue was discussed with the Quality and Evaluation Section Supervisor who agreed that potential generic design defect problems need to be evaluated and forwarded to the agency responsible for the product evaluation and registration certificate. 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 on to the manufacturer and NRC.

Since no SS&D evaluations were conducted during the period of this program review and because Arkansas is returning authority to conduct SS&D evaluations to NRC, this indicator is not rated.

4.3 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 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 Arkansas 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, the review team found that Arkansas' performance with respect to each of the rated performance indicators to be satisfactory. Accordingly, the review team recommends the Management Review Board find the Arkansas program to be adequate to protect public health and safety and compatible with NRC's program.

Below is a summary list of recommendations and suggestions, as mentioned in earlier sections of the report, for evaluation and implementation, as appropriate, by the State.

RECOMMENDATIONS:

1. The review team recommends that the Division 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)

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

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

4. The review team recommends that the Division 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)

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)

6. The review team recommends that the State continue to report events and participate in the 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)

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 on to the manufacturer and NRC. (Section 4.2.3)

SUGGESTIONS:

1. The review team suggests that management continue to reevaluate progress and implement the Action Plan. (Section 3.4)

2. The review team suggests that, for the purposes of compatibility, the State adopt the NRC regulations in 10 CFR 30.32(g) and 32.210. (Section 4.2)

GOOD PRACTICE:

The review team identified the Division's Self-Evaluation Program as a good practice. The Division Director initiated a Self-Evaluation Program to assess the Division's status relative to the comments and recommendations made after the 1995 program review. In addition to examining the previous review findings, the Self-Evaluation Program provided an opportunity for Division staff to measure their current program against the new IMPEP indicators. Strategies were then developed to address the licensing backlog, the need to develop licensing and inspection guidance, and to revise rules and regulations.

The self-evaluation initiative led to the issuance of several Action Plans. These Action Plans identify a specific topic to be addressed (e.g., revision of rules and regulations), and are numbered for tracking purposes. A project leader and team are named, and beginning and projected completion dates are established for each Action Plan. There is a provision for amending the completion date; however, the Division Director must approve and document any changes. Upon completion of the tasks identified in the Action Plan, management will review and approve the completed work by signature.

LIST OF APPENDICES AND ATTACHMENTS

Appendix A	IMPEP Review Team Members
Appendix B	Arkansas Organization Charts
Appendix C	Inspection File Reviews
Appendix D	License File Reviews
Appendix E	Incident File Reviews

APPENDIX A

IMPEP REVIEW TEAM MEMBERS

Name	Area of Responsibility
Lloyd Bolling, OSP	Team Leader Technical Staffing and Training Legislation and Program Elements Required for Compatibility
David Collins, Region-II	Status of Materials Inspection Program Technical Quality of Inspections
Martha Dibblee, Oregon Linda McLean, Region-IV	Quality of Licensing Actions
Thomas O'Brien, OSP	Response to Incidents and Allegations Sealed Source and Device Evaluation Program

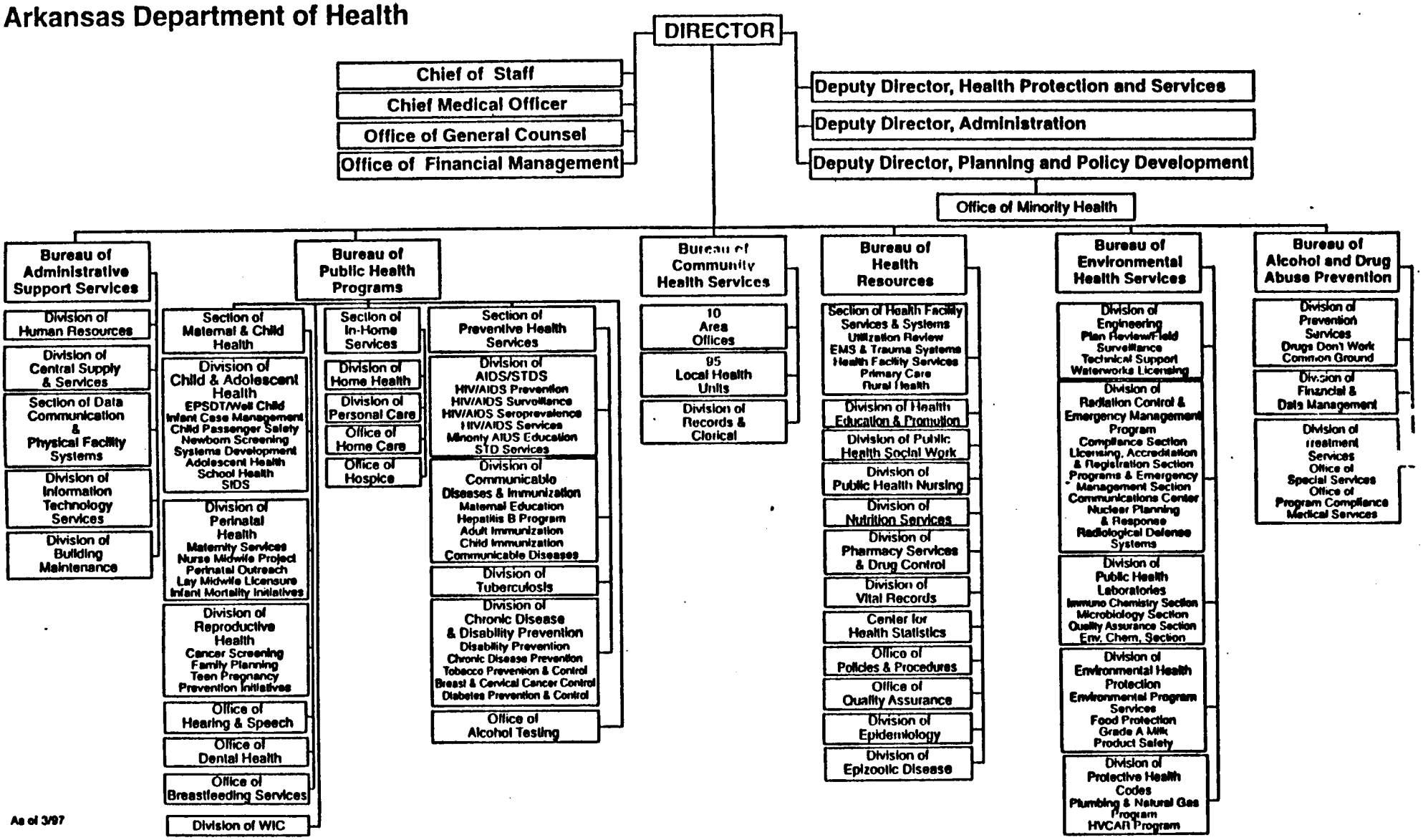
APPENDIX B

ARKANSAS

DIVISION OF RADIATION CONTROL AND EMERGENCY MANAGEMENT

ORGANIZATION CHARTS

Arkansas Department of Health



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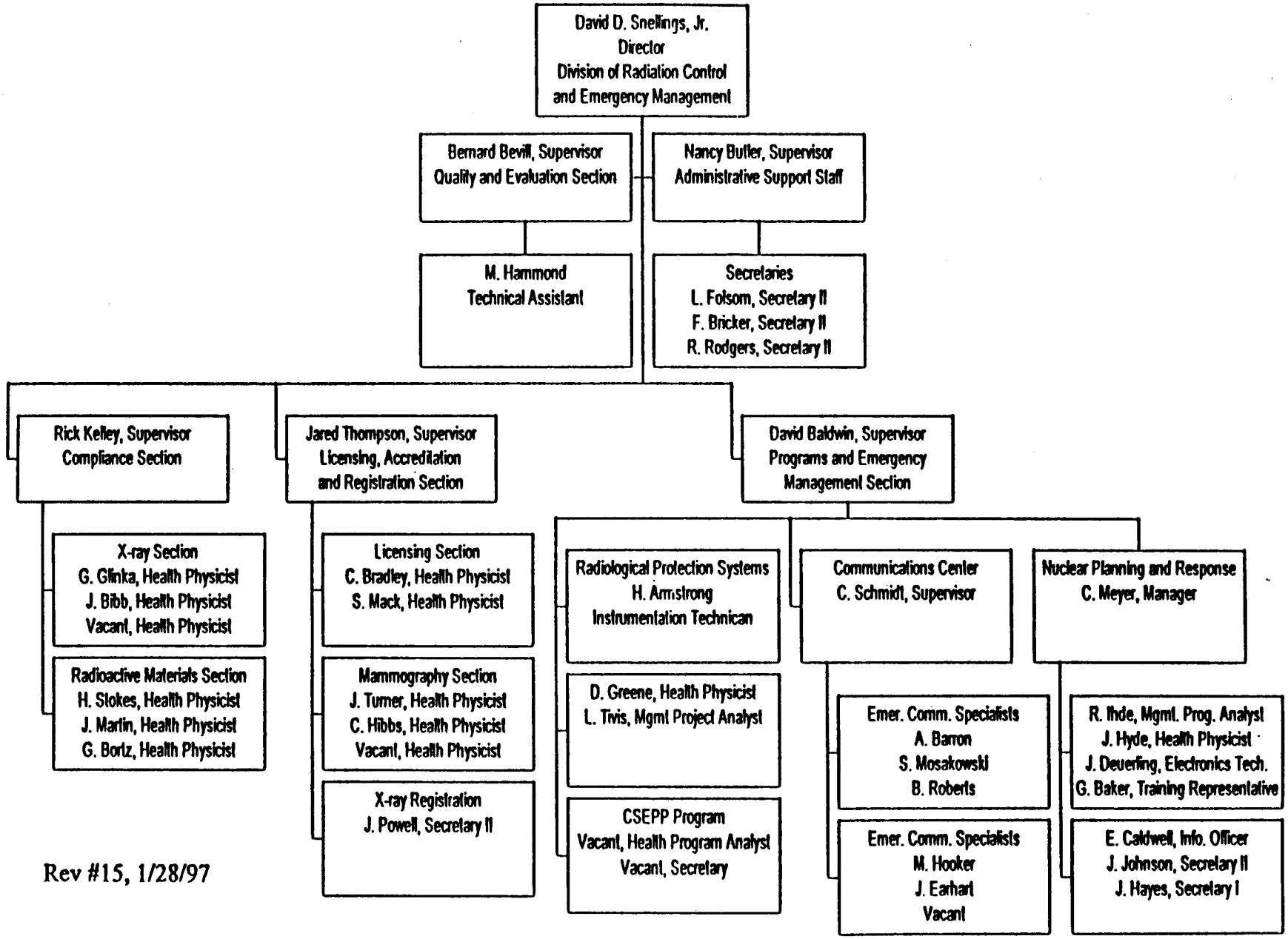
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Director
Division of Radiation Control
and Emergency Management
Bernard Bevill, Supervisor
Quality and Evaluation Section
Nancy Butler, Supervisor
Administrative Support Staff
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Technical Assistant
Secretaries
L. Folsom, Secretary II
F. Bricker, Secretary II
R. Rodgers, Secretary II
Rick Kelley, Supervisor
Compliance Section
Jared Thompson, Supervisor
Licensing, Accreditation
and Registration Section
David Baldwin, Supervisor
Programs and Emergency
Management Section
X-ray Section
G. Glinka, Health Physicist
J. Bibb, Health Physicist
Vacant, Health Physicist
Radioactive Materials Section
H. Stokes, Health Physicist
J. Martin, Health Physicist
G. Bortz, Health Physicist
Licensing Section
C. Bradley, Health Physicist
S. Mack, Health Physicist
Mammography Section
J. Turner, Health Physicist
C. Hibbs, Health Physicist
Vacant, Health Physicist
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J. Powell, Secretary II
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Instrumentation Technican
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CSEPP Program
Vacant, Health Program Analyst
Vacant, Secretary
Communications Center
C. Schmidt, Supervisor
Emer. Comm. Specialists
A. Barron
S. Mosakowski
B. Roberts
Emer. Comm. Specialists
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E. Caldwell, Info. Officer
J. Johnson, Secretary II
J. Hayes, Secretary I

Rev #15, 1/28/97