

June 6, 2001

Mr. Thomas W. Ortciger, Director
Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, IL 62704

Dear Mr. Ortciger:

On May 21, 2001, the Management Review Board (MRB) met to consider the proposed final Integrated Materials Performance Evaluation Program (IMPEP) report on the Illinois Agreement State Program. The MRB found the Illinois program adequate to protect public health and safety and compatible with the Nuclear Regulatory Commission's program.

Section 5.0, page 17, of the enclosed final report presents the IMPEP team's single recommendation. Through various correspondence, we understand what actions you intend to take in response to this recommendation. We request no additional information.

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 and your support of the Radiation Control Program. I look forward to our agencies continuing to work cooperatively in the future.

Sincerely,

/RA/

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

Enclosures:
As stated

cc: Paul Eastvold, Manager
Office of Radiation Safety

Richard M. Fry, NC
Agreement State Liaison to
the Management Review Board

T. W. Ortziger

June 6, 2001

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF ILLINOIS AGREEMENT STATE PROGRAM

March 5-9, 2001

FINAL REPORT

U.S. Nuclear Regulatory Commission

1.0 INTRODUCTION

This report presents the results of the review of the Illinois radiation control program. The review was conducted during the period March 5-9, 2001, by a review team comprised of technical staff members from the Nuclear Regulatory Commission (NRC) and the Agreement State of Maine. 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 29, 1997 to March 5, 2001, were discussed with Illinois management on March 9, 2001.

A draft of this report was issued to Illinois for factual comment on April 10, 2001. The State responded in a letter dated April 30, 2001. The Management Review Board (MRB) met on May 21, 2001 to consider the proposed final report. The MRB found the Illinois radiation control program was adequate to protect public health and safety and compatible with NRC's program.

The Illinois Agreement State Program is administered by Illinois Office of Radiation Safety (the Office) and is located within the Department of Nuclear Safety (the Department). The Radiation Safety Manager directs the Office. The Office has two Divisions: the Radioactive Materials Division (the Division) and the Electronic Products Division. Within the Division are three Sections: the Materials Licensing Section, the Low-Level Radioactive Waste (LLRW) Licensing and Decommissioning Section, and the Inspections and Enforcement Section. The Department has one field office located in Glen Ellyn, Illinois. Five materials inspectors are based in that location. An organization chart for the Department is included as Appendix B. At the time of the review, the Illinois program regulated 731 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 Illinois.

In preparation for the review, a questionnaire addressing the common and non-common performance indicators was sent to the Department on January 5, 2001. The Department provided a response to the questionnaire on February 5, 2001. A copy of the questionnaire responses is included as Appendix G of the proposed final report.

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

Section 2 below discusses the Department'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 and

recommendations. Recommendations made by the review team are comments that relate directly to program performance by the Department. A response is requested from the Department 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 28, 1997, one recommendation was made and transmitted to Mr. Thomas W. Ortziger, Director, the Department, on July 8, 1997. The team's review of the current status of this recommendation is as follows:

1. The review team recommends that the Department expedite promulgation of Part 330 at the first opportunity.

Current Status: The State adopted the restructured Ill. Adm. Code 330, Licensing of Radioactive Material, on June 1, 2000. The final regulations were provided to NRC for comment on July 11, 2000. As a result of the NRC review, the regulations were determined to meet the compatibility and health and safety categories established in the Office of State and Tribal Programs (STP) [Procedure SA-200](#) on August 21, 2000. This recommendation is closed.

During the 1997 review, nine suggestions were made for the Department to consider. The 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 team focused on four factors in reviewing this indicator: inspection frequency, overdue inspections, initial inspections of new licenses, and timely dispatch of inspection findings to licensees. The review team's evaluation is based on the Department's questionnaire responses relative to this indicator, data gathered independently from the Department's licensing and inspection data tracking system, the examination of complete licensing and inspection casework, and interviews with managers and staff.

The team's review of the Division's inspection priorities verified that the Division's inspection frequencies for various types or groups of licenses are as frequent, or more frequent, as similar license types or groups listed in the frequency schedule in the NRC Inspection Manual Chapter (IMC) 2800. The Division requires more frequent inspections in some license categories as follows: wireline services were verified to be inspected on a two year frequency as compared to the NRC three year frequency; all type A broad scope licenses are inspected on a one year frequency compared with the NRC two year frequency for type A broad industrial and academic and a one year frequency of type A broad medical; type B and C broad scope licenses are

inspected on a two and three year frequency, respectively, compared to the NRC frequencies of three and five years; and general license (GL) distribution type licenses are on a four year frequency compared to NRC's five year frequency.

In their response to the questionnaire, the Division indicated that there were no inspections currently overdue by more than 25 percent of the NRC frequency. This information was verified during the inspection casework reviews and the review of the monthly generated "inspections due" lists provided to the team. The review team noted that out of 21 inspection files examined, one routine inspection and one initial inspection were conducted overdue. Follow-up discussions with Division management revealed that in December 2000, the staff identified several overdue initial and routine inspections. The discrepancy was attributed to a computer programming error. The team found that 20 of the 35 initial inspections completed during the review period were not conducted within the six-month or one-year time frame as per procedure. Delays ranged from 3 to 12 months late. Upon discovering the error, Division staff immediately took steps to resolve the computer programming problem and complete the overdue inspections. The Division completed all overdue inspections identified during December 2000 by February 1, 2001 and continues to monitor the inspection database at least monthly.

The timeliness of the issuance of inspection findings was also evaluated during the inspection file review. The Division has a goal that the findings to be dispatched within 30 days following the inspection. Out of 21 inspection files examined, only one of the inspection findings sent to the licensees exceeded 30 days, because of the need for additional office review.

The State reported in their response to the questionnaire that 190 licensees had submitted 1,596 requests for reciprocity during the review period, of which 115 were core licensees. The Division reported that 24 reciprocity licenses were inspected, which represents about 21 percent of the reciprocity licenses available for inspection. Fourteen of the inspections were industrial radiography, eight were source exchanges, and two were well logging. During the 1998 periodic review, the Division disagreed with the goals of IMC 1220 as Agreement States did not have substantial input into the guidance. The Division established alternative goals of 10-20 percent of Priority 1 licensees and reactive inspections for other priorities. The team considered that the Division expended considerable resources since the last review and that the number of reciprocity inspections performed was adequate and satisfied the Department's alternative goals.

Based on the IMPEP evaluation criteria, the review team recommends that Illinois' performance with respect to the indicator, Status of the 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 radioactive materials inspections conducted during the review period. The casework included all of the Department's materials inspectors, and covered inspections of various types as follows: industrial radiography, medical broad scope, academic broad scope, high dose rate afterloader (HDR), gamma stereotactic radiosurgery, pool irradiator, wireline services, veterinary medicine, laboratory research and development, nuclear pharmacy, nuclear laundry, specific medical, and reciprocity. 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 the licensee's radiation protection program. The inspection reports were thorough, complete, consistent, and of high quality, with sufficient documentation to ensure that licensee's performance with respect to health and safety was acceptable. The documentation supported violations, recommendations made to the licensee, and unresolved safety issues. Exit interviews were held with appropriate licensee personnel and discussions were well documented in the reports. Team inspections were performed when appropriate and for training purposes.

The review team found that routine inspections adequately cover the licensee's radiation protection program and include a written summary of the scope of the licensed activities and a root cause if a noncompliance was identified. The review team noted that the majority of violations cited are recordkeeping infractions. The review team discussed the current performance-based, risk-informed inspection philosophy with the staff. The review team also found that the inspectors observed licensed operations whenever possible. Inspection accompaniments were conducted by the Radiation Safety Manager, the Division Chief, the Inspection and Enforcement Head, as well as the Glen Ellyn Office Supervisor.

Three materials inspectors were accompanied by a review team member during the period of January 31 to February 6, 2001. Other Division inspectors were accompanied during the 1997 review. One inspector was accompanied during the inspection of an industrial radiography program and the other two inspectors were accompanied on medical inspections. During the accompaniments, each inspector demonstrated appropriate inspection techniques and knowledge of the regulations, and conducted performance-based inspections. The inspectors were trained, well prepared for the inspection, and thorough in their audits of the licensees' radiation safety programs. Each inspector conducted effective interviews with appropriate licensee personnel, observed licensed operations, conducted confirmatory measurements, and utilized good health physics practices. Their inspections were adequate to assess radiological health and safety at the licensed facilities.

The Department has an adequate number and types of survey meters to support the current inspection program as well as for responding to incidents and emergency conditions. The Department calibrates their own survey instruments at their Conference of Radiation Control Program Directors, Inc., (CRCPD)-certified Regional Calibration Laboratory. Appropriate, calibrated survey instruments such as GM meters, scintillation detectors, ion chambers, micro-R meters, and neutron meters were observed. They also have portable multi-channel analyzers that can be used in the field at inspection sites. Air monitoring equipment is also available. Contamination wipes are sent to the State's laboratory for analysis. The Environmental Laboratory maintains a mobile laboratory van for use in emergencies and emergency exercises. Both laboratories are managed by the Office of Environmental Safety.

Based on the IMPEP evaluation criteria, the review team recommends that Illinois' 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 Division'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 State's questionnaire responses relative to this indicator, interviewed Division management and staff, and considered any possible workload backlogs.

The Division Chief and Assistant to the Division Chief supervise three administrative and 17 technical staff members. The 12 technical staff members in the Materials Licensing and Inspection and Enforcement Sections are classified as Materials Licensing Reviewers and Inspectors, respectively. The remaining technical staff members are in the LLRW Licensing and Site Decommissioning Section.

The Division has an experienced staff and low staff turnover. The Division is fully staffed and there was one departure since the last IMPEP review. The vacancy was filled in an expedient manner. An additional license reviewer position was also created during the review period. The team determined that the Division has a well balanced staff, and a sufficient number of trained personnel to carry out regulatory duties.

All technical staff members are required to have bachelor's degrees or equivalent training in the physical and/or life sciences in addition to prior experience. New hires are allowed to work with the more senior staff until appropriate training and experience is received, and until the individual obtains the confidence to perform the assigned tasks independently. The team confirmed the qualifications of the staff hired since the 1997 IMPEP review and verified their performance through the review of licensing and compliance casework.

A training course tracking sheet is used to monitor which classes each staff member has attended. Division staff are familiar with the NRC/Organization of Agreement States (OAS) Training Working Group Report. A complete and updated written training program based on the working group report was established for use by materials license reviewers. The Division Chief stated that a similar program would be created for materials inspectors if a new inspector were hired.

The Illinois Radiation Protection Advisory Council (Council) was created by the General Assembly in 1959. It is composed of seven members appointed by the Governor and two ex officio members from the Department of Labor and the Commerce Commission. The members reflect a variety of backgrounds in the use of radiation sources. The purpose of the Council is to assist the Department in formulation, implementing, and reviewing policies and programs to ensure safe and constructive uses of ionizing radiation. The Council also makes recommendations and provides the Department with technical advice and assistance as required. A Conflict of Interest Questionnaire form is filed and maintained on each member of the Council.

Based on the IMPEP evaluation criteria, the review team recommends that Illinois' 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 staff for 19 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 evaluated 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 were completed during the review period. The sampling included the following types: large and small irradiator, medical (including broad scope), academic (including broad scope), nuclear pharmacy, research and development, veterinary nuclear medicine, industrial radiography, fixed gauges and devices, and wireline services. Licensing actions included three new licensees, seven renewals, nine amendments, five terminations, and two bankruptcies. A list of the licenses evaluated with case-specific comments can be found in Appendix D.

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 almost always stated clearly, backed by information contained in the file, and inspectable. The licensee's compliance history was taken into account when reviewing renewal applications and amendments. Reviewers appropriately used the State's licensing guides, license templates, standard conditions and checklists. No potentially significant health and safety issues were identified.

Licensing actions are all tracked via "blue sheets." The blue sheets are generated by the clerical staff upon receipt, the information entered into the database, and then the action is assigned to a license reviewer. The blue sheets follow the status of the licensing action throughout the process. Good communication was recognized between licensing and inspection staff via "green sheets" placed in license files. These sheets are utilized for license reviewers and inspectors to communicate any issues or problems identified during the review process or inspection.

The review team found that the staff follows appropriate licensing guides during the review process to ensure that licensees submit information necessary to support their request. The review team found the checklists used for each type of program to be comprehensive and incorporated excellent notes to assist the staff with their review of the applications. Letters and documented telephone conversations contained appropriate regulatory language and addressed deficiencies. The use of license templates by the staff also resulted in notable consistency between reviewers. Overall, the review team found that the licensing actions were thorough, complete, consistent, of high quality and properly addressed health and safety issues.

Several licensing actions examined by the team required the licensee to submit financial assurance. The LLRW Licensing and Site Decommission Section determines the financial assurance requirements for the licensing staff. The originals of the financial assurance documents are maintained in the licensee file.

The team found that terminated licensing actions were well documented. The files included the appropriate material transfer records and survey records. Staff from the Office of Environmental

Safety, in coordination with the licensing and inspection staff, takes confirmation surveys for license termination. An evaluation of the selected termination records revealed excellent communication between the licensing, inspection, and the Environmental Safety staff to prevent abandonment of radioactive material. The files showed that documentation of proper disposal or transfer was provided.

Licenses are renewed on a five-year frequency. Licenses that are under timely renewal are amended as necessary to assure that public health and safety issues are addressed during the period that the license is undergoing the renewal process. Deficiencies are addressed by letters and documented telephone conferences, which used appropriate regulatory language. Management reviews the licensing actions prior to issuance. All licenses are signed by the Radioactive Materials Licensing Section Head.

Based on the IMPEP evaluation criteria, the review team recommends that Illinois' 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 Department's actions in responding to incidents, the review team examined the Department's response to the questionnaire relative to this indicator, evaluated selected incidents reported for Illinois in the Nuclear Material Events Database (NMED) against those contained in the Illinois' files, and evaluated the casework and supporting documentation for 11 material incidents. A list of the incident casework examined with case-specific comments is included in Appendix E. The team also reviewed the Department's response to seven allegations involving radioactive materials, including four allegations referred to the Department by the NRC during the review period.

The review team discussed the Department's incident response procedures, file documentation, the State's equivalent to the Freedom of Information Act, NMED, and notification of incidents to the NRC Operations Center with the Division Chief, Inspection and Enforcement Head, Regional Inspection Supervisor, and selected staff.

The Division has primary responsibility for initial response and follow up to incidents involving radioactive materials. Additional aid for incident response can be received from the Office of Environmental Safety when necessary. The State also has the Radiological Assessment and Coordinated Emergency Response (RACER) program that draws staff and expertise from various divisions of the Department in responding to incidents.

The Division does not differentiate between incidents and allegations as defined by the NRC; both are described as incidents under Division terminology. As such, the Division does not have separate procedures for incidents and allegations. The Division's "Investigations and Special Surveys" procedure was last revised April 14, 1995. However, revision 10 of their "Radiological Duty Officer (RDO) Standard Operating Procedure" was dated February 1, 2001. The procedure details the responsibilities of the RDO, a rotating position within the Department, to ensure that a lead is designated and fully prepared for incident response. Though the procedure was complete in detailing steps in responding to an incident, information on NMED reporting or the handling of allegation-related tasks, such as follow up to allegers, was not included in the procedure. A team

member and the Division Chief discussed the advantages of updating the Division's procedures to include these topics.

Due to the Division not differentiating between incidents and allegations, the review team was unable to determine how many materials incidents occurred during the review period or how many incidents the Division should have reported to NRC per STP [Procedure SA-300](#), Reporting Material Events. Legal staff reviews each incident before any materials are released to the public. Eleven incidents were selected for review. The incidents included the following categories: lost or stolen material, leaking source, misadministration, equipment failure, overexposure, damage to equipment, contamination event, and accidental exposure. The review team found that the Department's response to incidents was generally complete and comprehensive. 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 Department took suitable enforcement action.

In reviewing the inspection notes for inspections following incidents where the Division did not conduct an on-site response, inspection notes generally did not mention following up on the incident. Discussions with inspectors and the Inspection and Enforcement Head revealed that inspectors prepare for inspections by reviewing past inspections, including any incident reports, and that past incidents receive follow up, if appropriate. The review team and Division management discussed the importance of documenting follow up of incidents during inspections.

The team found that significant incidents were appropriately reported to the NRC Operations Center in a timely manner. The Division Chief has a copy of the reporting requirements in STP Procedure SA-300, and uses it to determine which events should be reported. All of the eight incidents reviewed by the review team that required reporting to the NRC Operations Center were reported.

During the review period, four allegations were referred to the Division by the NRC. The casework for these allegations was reviewed as well as the casework for three additional incidents, that fit the criteria for allegations as defined by the NRC, reported directly to the Department. The review of the casework and the Division's files indicated that the Division took prompt and appropriate action in response to the concerns raised, including responding to allegers when appropriate. The Department's procedures for handling incidents are incomplete in terms of handling "allegations." A team member discussed the benefits of updating procedures with the Division Chief.

Based on the IMPEP evaluation criteria, the review team recommends that Illinois' 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 Program Department; and (4) Uranium Recovery Program.

4.1 Legislation and Program Elements Required for Compatibility

4.1.1 Legislation

The State provided, in their response to the questionnaire, a listing of legislation that affects the radiation control program. The Department is designated as the State radiation protection agency under the provisions of the Radiation Protection Act of 1990, as amended [420 ILCS 40]. The Act grants the Department the authority to promulgate rules and regulations to be followed in the administration of the radiation protection program. During the review period, the Radiation Protection Act was amended to allow State regulation of Federal entities, if a Federal entity agrees to be regulated by the State.

The Radioactive Waste Storage Act [420 ILCS 35], the Illinois Low-Level Radioactive Waste Management Act [420 ILCS 20] and the Uranium and Thorium Mill Tailings Control Act [420 ILCS 42] statutes provide authority for the low-level radioactive waste disposal and uranium recovery programs.

Other statutes which affect the radiation control program include: Central Midwest Radioactive Waste Compact Act [45 ILCS 140]; Department of Nuclear Safety [20 ILCS 2005]; Freedom of Information Act [5 ILCS 140]; and Illinois Administrative Procedure Act [5 ILCS 100].

Public Act 91-752, which was effective June 2, 2000, extended the sunset date for the Radiation Protection Act until January 1, 2011. The other aforementioned statutes do not have sunset provisions.

4.1.2 Program Elements Required for Compatibility

The Illinois regulations for control of radiation are located in 32 Illinois Administrative Code and apply to all ionizing radiation, whether emitted from radionuclides or devices. Illinois requires a license for possession and use of radioactive materials, including naturally occurring and accelerator-produced radionuclides.

The review team examined the State's rulemaking process and found that the process takes approximately six months after preparation of a draft rule. Proposed rules are published in the Illinois Register with a minimum 45-day comment period, and may include a public hearing. Proposed rules are sent to NRC for a compatibility ruling. After resolution of comments, the Department provides the comments and responses to the Joint Committee on Administrative Rules (JCAR), a bipartisan committee consisting of legislators from the Illinois House of Representatives and Senate. After resolution of JCAR comments, the rule must be re-published for comment if substantial changes were made or scheduled for a vote at the next available monthly JCAR meeting. Approved rules are published as final in the Illinois Register. Final rules are sent to the NRC and updated on the Department's website. The Department has the authority to issue legally binding requirements (e.g., license conditions) in lieu of regulations until compatible regulations become effective.

The review team evaluated Illinois' 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 regulation status with data obtained from the Office of State and Tribal Programs' Regulation Assessment Tracking System. Discussions with program staff during this review indicated a good awareness of recently adopted rules. The Department has plans in process to adopt the three rules listed below that were overdue at the time of the review. Current NRC policy requires that Agreement States adopt certain equivalent regulations or legally binding requirements no later than three years after they are effective.

- "Compatibility with the International Atomic Energy Agency," 10 CFR Part 71 amendment (60 FR 50248 and 61 FR 28724) that became effective April 1, 1996.

Illinois sent a letter to the NRC Office of State and Tribal Programs on February 7, 2001, requesting information which would allow the State to incorporate by reference the transportation requirements of 10 CFR Part 71. The Office of State and Tribal Programs responded by letter dated March 27, 2001 stating that the Illinois Department of Nuclear Safety can adopt 49 CFR Parts 170 - 189 by reference, along with the appropriate sections of 10 CFR Part 71 that are not specifically included in 49 CFR, in order to maintain compatibility. The Department is evaluating that response. Adoption of the rule is planned for 2001.

- "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.

A compatible rule is in draft and is scheduled for promulgation in 2001.

- "Deliberate Misconduct by Unlicensed Persons," 10 CFR Parts 30, 40, 61, 70, and 150 amendments (63 FR 1890 and 63 FR 13773) that became effective February 12, 1998.

This regulation is under review by the Department's legal staff to determine the feasibility of adopting the rule.

Although the following rule has not been adopted, the Department plans to address this regulation with a Part 335 update, and is awaiting NRC's issuance of the revised 10 CFR Part 35, due in 2001.

- "Preparation, Transfer for Commercial Distribution and Use of Byproduct Material for Medical Use," 10 CFR Parts 30, 32, and 35 amendments (59 FR 61767, 59 FR 65243 and 60 FR 322) that became effective January 1, 1995.

Although, the following rule has not been adopted by the State, the Department Director's exemption process, allows the Department to release patients administered radioactive material on a case-by-case evaluation. Exemptions for licensees have been granted for certain non-Hodgkins lymphoma patients and a thyroid treatment is now being considered for exemption. This policy may meet the Category C compatibility criteria for this rule; however, the review team discussed with the Department that this alternative process needs to be evaluated by NRC following STP Procedure SA-201. The Division has provided information on this exemption process to the NRC for review. NRC will contact the Department when its evaluation is completed.

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

The following rule is currently enforced by the Division through licensing and termination process. A compatible rule is in draft and is scheduled for promulgation in Spring 2001. Either the currently legally binding requirements or the draft rule needs to be evaluated by NRC following STP Procedure SA-201.

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

The following regulations have been adopted by the State; however, there are differences between the State's and the NRC's regulations that need to be addressed. After discussions with the Department, they agreed to reevaluate these regulations. Following this evaluation, either the existing or revised rules will need to be submitted for NRC review following STP Procedure SA-201.

- "Quality Management Program and Misadministrations," 10 CFR Part 35 amendment (56 FR 34104) that became effective January 27, 1995.

As noted in the 1997 Illinois IMPEP review final report, the State adopted misadministration requirements on May 2, 1994, in Part 335 "Notifications, Reports and Records of Reportable Events." The State requires licensees to notify the patient of a reportable event within 15 days after the licensee ascertains and confirms that a reportable event has occurred instead of within 24 hours as required by NRC regulations. NRC is continuing to defer compatibility findings for Agreement States that have not yet adopted a compatible Quality Management rule until NRC issues a revised Part 35 rule, compatibility designations for the new rule are established, and an effective date for Agreement State implementation has been set.

- "Low-Level Waste Shipment Manifest Information and Reporting," 10 CFR Parts 20 and 61 amendments (60 FR 15649 and 60 FR 25983) that became effective March 1, 1998. Illinois and other Agreement States were expected to have an equivalent rule effective on the same date.

The State has its own shipping manifest requirements in Part 609 which are different than the uniform shipping manifest requirements in NRC regulations. This regulation is Category B because of its significant direct transboundary implications. The State element should be essentially identical to that of NRC. The uniform manifest rule allows an Agreement State to require additional information on a manifest for the State's regulatory purposes.

The following regulation was imposed by the Department through a compatible legally binding requirement.

- "Licensing and Radiation Safety Requirements for Irradiators," 10 CFR Part 36 amendment (58 FR 7715) that became effective July 1, 1993.

The State reported that all irradiator licenses issued implement the rule through license conditions. This regulation is planned to be incorporated into State regulations and adopted with the issuance of Part 336.

The following regulations will become due in the future and are included here to assist the State in including them in future rulemakings or by adopting alternate generic legally binding requirements:

- "Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations; Clarifying Amendments and Corrections," 10 CFR Part 34 amendment (63 FR 37059) that became effective July 9, 1998.
- "Minor Corrections, Clarifying Changes, and a Minor Policy Change," 10 CFR Parts 20, 32, 35, 36, and 39 amendments (63 FR 39477 and 63 FR 45393) that became effective October 26, 1998.
- "Transfer for Disposal and Manifests; Minor Technical Conforming Amendment," 10 CFR Part 20 amendment (63 FR 50127) that became effective November 20, 1998.
- "Radiological Criteria for License Termination of Uranium Recovery Facilities," 10 CFR Part 40 amendment (64 FR 17506) that became effective June 11, 1999.
- "Respiratory Protection and Controls to Restrict Internal Exposures," 10 CFR Part 20 amendment (64 FR 54543 and 64 FR 55524) that became effective February 2, 2000.
- "Energy Compensation Sources for Well Logging and Other Regulatory Clarifications," 10 CFR Part 39 amendment (65 FR 20337) that became effective May 17, 2000.
- "New Dosimetry Technology," 10 CFR Parts 34, 36, and 39 amendments (65 FR 63749 and 66 FR 1573) that became effective January 8, 2001.

The review team noted that the State has made progress in the adoption of regulations since the last IMPEP review, and that they have made a commitment to adopt the three outstanding regulations in 2001. Nonetheless, the State has three regulations that have not been adopted within three years of the effective date of NRC's final rule and a number of other compatibility-related issues that are in need of clarification. The review team recommends that the State adopt the regulations, or other legally-binding requirements, which are overdue for adoption.

Based on the IMPEP evaluation criteria, the review team recommends that Illinois' performance with respect to the indicator, Legislation and Program Elements Required for Compatibility, be found satisfactory with recommendations for improvement.

4.2 Sealed Source and Device (SS&D) Evaluation Program

In assessing the Department's SS&D evaluation, the review team examined information provided by the Department in response to the IMPEP questionnaire on this indicator. A review of selected new, amended, corrected, inactivated, converted and transferred SS&D evaluations, deficiency letters and supporting documents covering the review period was conducted. The review team

noted the Department's use of guidance documents and procedures, interviewed the staff, technical support professionals, and the Division Chief involved in the SS&D evaluations, and verified the use of regulations and license conditions to enforce commitments made in the applications.

4.2.1 Technical Quality of the Product Evaluation Program

The Department completed approximately 80 actions involving 75 registrations, transferred out 216 registration certificates to the Commonwealth of Massachusetts and another 12 to the State of Texas. Eleven case files were selected for review that included work performed by all reviewers. The cross-section sampling included all the Department's major SS&D manufacturers. The SS&D actions included new certificates, amendments, corrections, transfers, conversions, and inactivations. The certificates reviewed covered the period since March 1997, and represented cases completed by the principal reviewers. The SS&D certificates issued by the Department, and evaluated by the review team, are listed with case-specific comments in Appendix G.

The selected SS&D registration certificates and case files were reviewed for accuracy, appropriateness for authorization, tie-down statements, and over all technical quality. The casework was evaluated for timeliness, adherence to good radiation safety practice, acceptable engineering practices, reference to appropriate regulations, evaluation of safety evaluation reports, manufacturing Quality Assurance/Quality Control, supporting documents, peer and supervisory review as indicated, and proper signature authority. The files were checked for retention of necessary documents and other supporting data.

Analysis of the casework and interviews with staff and engineering technical support professionals, confirmed that the Division generally follows the recommended guidance from the NRC SS&D training workshops and NUREG-1556, Volume 3, issued in July 1998. All applicable and pertinent American National Standards Institute standards, NUREG-1556 Series, NRC Regulatory Guides, and applicable references were confirmed to be available and were used appropriately in performing the SS&D reviews. In reviewing emergent technology related products and new applications, the Department performed evaluations based on good and sound conservative assumptions to ensure public health and safety. Appropriate review checklists were used to assure that all relevant materials were submitted and reviewed. The checklists are retained in the case files. Registrations clearly summarized the product evaluation and provided license reviewers with adequate information on areas requiring additional attention to license the possession, use, and distribution of the products. The team determined that product evaluations were thorough, complete, consistent, of acceptable technical quality, and adequately addressed the integrity of the products during use and in the event of likely accidents.

4.2.2 Technical Staffing and Training

The Department attributed about 10-15% of the staff time is spent on safety evaluation of registration certificates. The Department adopted a team approach in performing evaluations of products to be registered, and on an as need basis, can obtain engineering and technical assistance from two registered professional engineers that work in the LLRW and Site Decommissioning Section. The Department discussed with the review team the use of

five-person teams to limit safety evaluations performed by external support. All reviewers' work is concurred at the supervisory level. This team approach fosters consistency and acts as a conduit to provide the necessary experience and expertise for this size of program.

The review team examined the training and experience documentation of the staff and management involved in the evaluation program. There have been no additional staff involved in the evaluation program since 1994. The educational qualifications for the current staff were evaluated and were found adequate.

4.2.3 Evaluation of Defects and Incidents Regarding SS&Ds

No safety significant or generic incidents, issues, or defects related to SS&D issues were reported concerning the devices (products) registered by the Department during the review period. The review team also verified that there were no reported incidents through discussions with the SS&D reviewers and a review of the NMED database.

No incidents were identified that were related to any malfunctioning devices or products considered during this review. One of the Department staff demonstrated their ability to conduct computer searches for NMED data concerning specified SS&D devices and manufacturers.

The review team discussed a few general issues with the Department, including the need to closely follow the format for documenting product evaluations in the registry certificates as detailed in NUREG-1556, Volume 3, (i.e., completion of check lists and inclusion of dual units) in order to foster national consistency. Department staff agreed that this is a valid issue which should be brought to the attention of the SS&D working group.

Based on the IMPEP evaluation criteria, the review team recommends that Illinois' performance with respect to the indicator, Sealed Source and Device Evaluation Program, be found satisfactory.

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. The State's LLRW program is currently inactive, and it is anticipated that there will be no further activity with the program for several years. Therefore, the staff are working on other projects. Accordingly, the review team did not review this indicator.

4.4 Uranium Recovery Program

In conducting this review, five sub-indicators were used to evaluate the Program's performance regarding the uranium recovery program. These sub-indicators include: (1) Status of Uranium Recovery 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. The results of the uranium recovery program review will be discussed under each of

these sub-indicators. In 1990, the Illinois Agreement was amended to include the authority for 11e.(2) byproduct material and the facilities that generate such material.

The Department's uranium recovery program is administered under the LLRW Licensing and Site Decommissioning Section. The Department has only one licensee in this program, the Kerr-McGee Chemical Corporation (Kerr-McGee), Rare Earths Facility, located in West Chicago, Illinois. This facility is in the process of decommissioning, and the material is being shipped out of State for disposal. In addition, off-site residential contamination is authorized by license condition to be brought back on-site for a limited time prior to shipment for disposal. The Department has worked closely with the local community and the licensee to develop a decommissioning plan acceptable to all stakeholders.

4.4.1 Status of Uranium Recovery Inspection Program

The Department has an annual inspection frequency for the Kerr-McGee site. The frequency is consistent with the criteria in IMC 2800 and IMC 2801 and has been applied since the licensee began decommissioning operations in 1994. The Department has a resident health physics inspector at the site who conducts daily, weekly, and monthly operational checks and observes site operations daily. The current resident inspector has been in the position since 1996. Also on-site is an engineering company, under Department contract, that supports the health physics resident. The contractor audits the engineering quality control on the site and performs environmental surveys.

The Department reviews the annual environmental monitoring report submitted by the licensee and determines compliance for the environmental program. This review is conducted on a separate schedule from the annual license compliance inspection. Three annual compliance inspections were conducted by the Springfield office staff since the last review. The review team found that there were no overdue or backlogged inspections for this license.

4.4.2 Technical Quality of Inspections

In reviewing this sub-indicator, the review team examined inspection files, inspection reports, and enforcement documentation for Kerr-McGee, which included the last three annual inspection reports. The file also had documentation for the last environmental monitoring data review and the quality assurance audit. The documentation for these activities show that past inspections and audits adequately covered the scope, completeness, and technical accuracy necessary to determine compliance with regulations, license conditions, and available guidance. Appropriate enforcement actions were taken given the scope of the violation noted. The inspections were thorough and the violation identified was quickly addressed by the licensee.

Given the location of the licensed site, there is an extensive environmental monitoring program with the licensee, the Department, and the Illinois Environmental Protection Agency, all conducting independent monitoring programs. The Department reviews the licensee's annual environmental monitoring report. In addition to the annual compliance inspection, a Quality Assurance inspection was conducted to evaluate the licensee's checks on the construction and clean-up activities at the site. The primary health physics inspector (from the Springfield office) was not accompanied by a team member for this review. However, the site was visited by a member of the review team. The

resident inspector conducted a tour of the site and demonstrated his knowledge and understanding of the site activities.

4.4.3 Technical Staffing and Training

The LLRW Licensing and Site Decommissioning Section Head supervises the staff conducting the annual compliance inspections and the resident inspector. The technical staff consists of two health physicists, two engineers (both professional engineers), and a geologist, with a support contractor supplying additional expertise in these areas. The review team examined the training, education, and experience of the staff members and found that the qualifications of the technical staff are commensurate with the expertise identified as necessary to regulate the radioactive material at the Kerr-McGee site. The Springfield-based inspectors have completed the requisite NRC core courses. The resident inspector has not taken the Inspection Procedures or the Fundamentals of Inspections courses; however, the Department describes his primary responsibilities at the site as project management. The resident inspector's responsibilities include the management of the Department's site contractors, oversight of the on-site health and safety activities, the licensee's work plans, special work permits, and the worker safety training program.

Additional support is provided by the staff in the Office of Environmental Safety for environmental monitoring, verification surveys, and sample analyses on an as needed basis. The Department has a laboratory located in West Chicago, Illinois. The laboratory was visited by a member of the review team and found to be a well equipped facility. The Office of Environmental Safety, Division of Radiochemistry, has a full time chemist assigned to the laboratory.

The review team determined that during the review period, a supervisor did not accompany inspectors each year. During the May 21, 2001 MRB meeting, Department management noted that the inspectors had been accompanied in previous years. The review team found no signs of performance deficiency due to lack of supervisory accompaniment by a supervisor.

4.4.4 Technical Quality of Licensing Actions

The review team evaluated nine amendments issued since the last review of the Kerr-McGee license. In examining the amendments and selected documentation in the file, the review team found that the majority of the license amendments were to change the volume of material leaving the site for disposal and to authorize the receipt of radioactive material brought on to the site from the residential clean-up activities. Other actions included authorizing the operation of the Water Treatment Plant, authorizing the use of the Field Verification System, establishing clean-up standards for residual uranium in dry soil, and authorizing Phase IV decommissioning activities. The license included appropriate license conditions for the decommissioning operations at the facility.

The Department has done extensive reviews on the licensee's request for alternate concentration limits (ACLs) during this review period. The ACL request is part of a comprehensive groundwater corrective action plan (CAP). The Department listed 20 groundwater constituents, identified in 10 CFR Part 40, Appendix A, to be included in the licensee's CAP. The final review of the CAP will

be performed by the Department and the Department's contractor. The Department is using the appropriate regulations and guidance documents for the review.

Based on a review of the licensing file, the team concluded that licensing actions were appropriate and that the license conditions were clear and well-written. Requirements associated with these conditions were based on a need to meet the regulations and to protect health and safety.

4.4.5 Response to Incidents and Allegations

There were no incidents or allegations pertaining to the Kerr-McGee activities during this review period.

Based on the IMPEP evaluation criteria, the review team recommends that Illinois' performance with respect to the indicator, Uranium Recovery Program, be found satisfactory.

5.0 SUMMARY

As noted in Sections 3 and 4 above, the review team found Illinois' performance to be satisfactory for seven performance indicators and satisfactory with recommendations for improvement for the non-common performance indicator, Legislation and Program Elements Required for Compatibility. Accordingly, the review team recommended and the MRB concurred in finding the Illinois Agreement State program to be adequate and compatible with NRC's program. Based on the results of the current IMPEP review, the next full review will be in approximately four years.

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

RECOMMENDATION:

1. The review team recommends that the State adopt the regulations, or other legally-binding requirements, which are overdue for adoption. (Section 4.1.2)

LIST OF APPENDICES AND ATTACHMENTS

Appendix A	IMPEP Review Team Members
Appendix B	Illinois Organization Charts
Appendix C	Inspection Casework Reviews
Appendix D	License Casework Reviews
Appendix E	Incident Casework Reviews
Appendix F	Sealed Source & Device Casework Reviews
Attachment 1	April 30, 2001 Letter from Thomas W. Ortciger Illinois' Response to Draft IMPEP Report
Attachment 2	Response to Illinois Comments to the Draft IMPEP Report

APPENDIX A

IMPEP REVIEW TEAM MEMBERS

Name	Area of Responsibility
Linda McLean, Region IV	Team Leader Uranium Recovery Program
Lance Rakovan, STP	Technical Staffing and Training Response to Incidents and Allegations
James Lynch, Region III	Legislation and Program Elements Required for Compatibility
Deborah Piskura, Region III	Status of Materials Inspection Program Technical Quality of Inspections
Ujagar Bhachu, NMSS	Sealed Source and Device Evaluation Program
Shawn Seeley, Maine	Technical Quality of Licensing Actions

APPENDIX B

ILLINOIS

DEPARTMENT OF NUCLEAR SAFETY

ORGANIZATION CHART

ML011070573

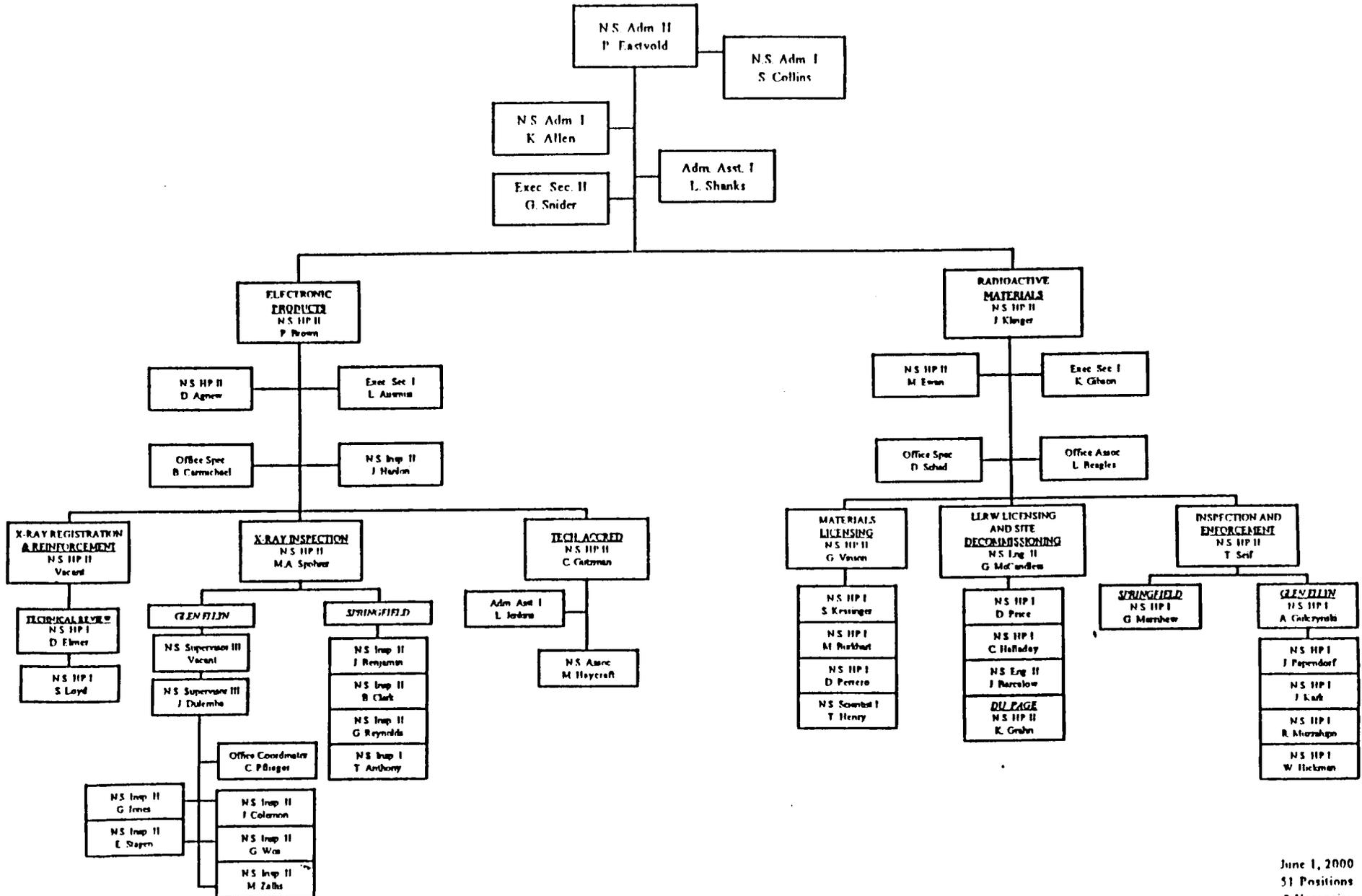
STATE OF ILLINOIS

GOVERNOR
George H. Ryan

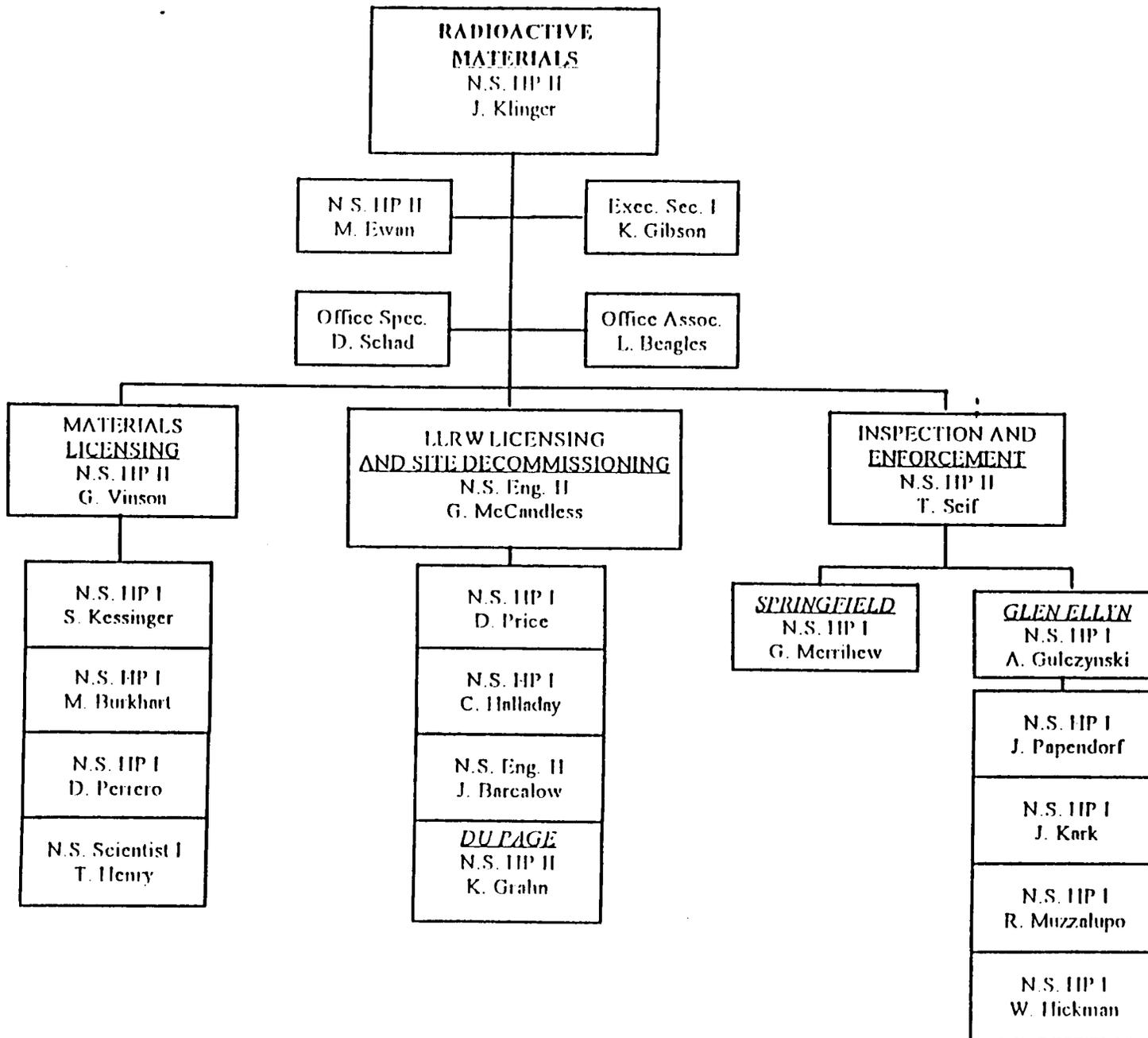
DEPARTMENT OF NUCLEAR
SAFETY
Thomas W. Ortziger
Director

OFFICE OF RADIATION
SAFETY
Paul D. Eastvold
Manager

OFFICE OF RADIATION SAFETY



June 1, 2000
51 Positions
2 Vacancies



APPENDIX C

INSPECTION CASEWORK REVIEWS

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

File No.: 1

Licensee: ADCO Services, Inc.
Location: Tinley Park, IL
License Type: Waste Brokerage Service
Inspection Date: 11/13 & 17/00

License No.: IL-01347-01
Inspection Type: Routine, Announced
Priority: 0.5
Inspector: AS, RM

File No.: 2

Licensee: Baker Atlas
Location: Olney, IL
License Type: Wireline/tracer studies
Inspection Date: 2/20/01

License No.: IL-01508-01
Inspection Type: Routine, Unannounced
Priority: 2
Inspector: GM

Comment:

- a) Inspection report did not indicate that a management representative was contacted during the inspection.

File No.: 3

Licensee: The College of DuPage
Location: Glen Ellyn, IL
License Type: Academic R&D
Inspection Date: 6/13/00

License No.: IL-01029-22
Inspection Type: Routine, Announced
Priority: 3
Inspector: JP

File No.: 4

Licensee: Cook County Hospital
Location: Chicago, IL
License Type: Broad Scope Medical/Teletherapy
Inspection Date: 8/1-2/00

License No.: IL-01768-01
Inspection Type: Routine, Announced
Priority: 1
Inspector: RM, WH

File No.: 5

Licensee: Diagnostic Health Services
Location: Bartlett, IL
License Type: Mobile Nuclear Medicine
Inspection Date: 9/10/99

License No.: IL-01397-01
Inspection Type: Routine, Announced
Priority: 2
Inspector: AG

File No.: 6

Licensee: Diagnostic Imaging Center
Location: Des Plaines, IL
License Type: Specific Medical, Multi-site
Inspection Date: 3/22-23/00

License No.: IL-01082-01
Inspection Type: Routine, Announced
Priority: 2
Inspector: WM

Comment:

- a) Notice of Violation issued 5/15/00, three weeks late.

File No.: 7

Licensee: Doctor's Hospital of Hyde Park
Location: Hyde Park, IL
License Type: Specific Medical (terminated)
Inspection Date: 6/5/00

License No.: IL-01846-01
Inspection Type: Special, Unannounced
Priority: 3
Inspector: JK, JP

File No.: 8

Licensee: Gunite, Corporation
Location: Rockford, IL
License Type: Industrial Radiography
Inspection Date: 1/23/98

License No.: IL-01616-02
Inspection Type: Routine, Unannounced
Priority: 1
Inspector: AG

File No.: 9

Licensee: Jan X
Location: Parma, MI
License Type: Industrial Radiography
Inspection Date: 5/24/00

License No.: 77-00123-01
Inspection Type: Unannounced, Reciprocity
Priority: 1
Inspector: JP

File No.: 10

Licensee: Kraft General Foods
Location: Glenview, IL
License Type: Laboratory R&D
Inspection Date: 6/17/98

License No.: IL-01585-01
Inspection Type: Routine, Unannounced
Priority: 3
Inspector: WH

File No.: 11

Licensee: Mc NDT
Location: Channahon, IL
License Type: Industrial Radiography
Inspection Date: 4/14 and 20/00

License No.: IL-01875-01
Inspection Type: Routine, Unannounced
Priority: 1
Inspector: WH

File No.: 12

Licensee: Memorial Medical Center
Location: Springfield, IL
License Type: Specific Medical/ HDR
Inspection Date: 3/30-31/00

License No.: IL-01343-01
Inspection Type: Routine, Unannounced
Priority: 1
Inspector: GM

File No.: 13

Licensee: Midwest Radiation Protection Services, Ltd.
Location: Naperville, IL
License Type: Service
Inspection Date: 6/14/99

License No.: IL-02046-01
Inspection Type: Announces, Initial
Priority: 3
Inspector: WH

File No.: 14

Licensee: Neutron Products, Inc.
Location: Dickerson, MD
License Type: Service (Source Installation)
Inspection Date: 2/28/01

License No.: 77-00113-01
Inspection Type: Unannounced, Reciprocity
Priority: 1
Inspector: JP

File No.: 15
Licensee: Northwestern Memorial Medical Center
Location: Chicago, IL
License Type: Medical Broad Scope, Gamma Knife
Inspection Date: 4/13-15/99

License No.: IL-01037-02
Inspection Type: Routine, Announced
Priority: 1
Inspector: JK, JP

File No.: 16
Licensee: Northwestern University
Location: Evanston, IL
License Type: Academic Broad Scope
Inspection Date: 11/8-10/99

License No.: IL-01879-01
Inspection Type: Routine, Announced
Priority: 1
Inspectors: RM, BS

File No.: 17
Licensee: Pharmacy Services of Peoria, LLC
Location: Peoria, IL
License Type: Nuclear Pharmacy
Inspection Date: 12/5/00

License No.: IL-01874-01
Inspection Type: Routine, Unannounced
Priority: 1
Inspector: GM

Comment:

- a) Inspection overdue by 3 months.

File No.: 18
Licensee: Professional Laundry Management
Location: Gardner, IL
License Type: Nuclear Laundry
Inspection Date: 7/27-28/99

License No.: IL-01942-01
Inspection Type: Routine, Unannounced
Priority: 1
Inspector: JP

File No.: 19
Licensee: Radiocat
Location: Wheeling, IL
License Type: Veterinary Medicine
Inspection Date: 7/10/98

License No.: IL-02024-01
Inspection Type: Announced, Initial
Priority: 3
Inspector: JP

Comment:

- a) Closing letter dated 9/14/98 sent out 51 days after licensee's response dated 7/25/98 to the Notice of Violation.

File No.: 20
Licensee: Rush-Presbyterian-St. Luke's Medical Center
Location: Chicago, IL
License Type: Broad Scope Medical, HDR
Inspection Date: 5/8-10/00

License No.: IL-01766-01
Inspection Type: Routine, Announced
Priority: 1
Inspector: WH, RM

File No.: 21
Licensee: STERIS, Inc.
Location: Libertyville, IL
License Type: Pool Irradiator
Inspection Date: 10/17/00

License No.: IL-01123-01
Inspection Type: Routine, Unannounced
Priority: 1
Inspector: RM

File No.: 22

Licensee: Thyroid Treatment Center of Illinois

Location: Peoria, IL

License Type: Specific Medical

Inspection Date: 12/13/99

License No.: IL-01761-01

Inspection Type: Routine, Unannounced

Priority: 3

Inspector: BS

File No.: 23

Licensee: Valent Biosciences

Location: Long Grove, IL

License Type: Specific R&D

Inspection Date: 1/4/01

License No.: IL-02094-01

Inspection Type: Announced, Initial

Priority: 3

Inspector: RM

Comment:

a) Inspection 3 months overdue following initial license issued 4/18/00.

File No.: 24

Licensee: Kerr-McGee

Location: West Chicago, IL

License Type: Thorium Recovery

Inspection Date: 2/23-27/98, 3/23-26/99, 4/19-21/00

License No.: STA-285

Inspection Type: Routine, Announced

Priority: 1

Inspector: DP

INSPECTOR ACCOMPANIMENTS

In addition, the following inspection accompaniments were performed as part of the IMPEP review.

File No.: 1

Licensee: Evanston Northwestern Healthcare

Location: Highland Park, IL

License Type: Broad Scope Medical (Multi-site)

Inspection Date: 1/31/01

License No.: IL-01248-02

Inspection Type: Announced, Initial

Priority: 1

Inspector: JK

File No.: 2

Licensee: Good Samaritan Hospital

Location: Downers Grove, IL

License Type: Medical, Specific

Inspection Date: 2/2/01

License No.: IL-01041-01

Inspection Type: Routine, Unannounced

Priority: 3

Inspector: AG

File No.: 3

Licensee: XRI

Location: Oak Lawn, IL

License Type: Industrial Radiography (fixed only)

Inspection Date: 2/6/01

License No.: IL-01787-01

Inspection Type: Routine, Unannounced

Priority: 1

Inspector: JP

APPENDIX D

LICENSE CASEWORK REVIEWS

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

File No.: 1

Licensee: Robert Kohn, MD

Location: McHenry, IL

License Type: Medical - Private Practice

Date Amendment Issued: 12/21/00

License No.: IL-02110-01

Amendment No.: 0

Type of Action: New

License Reviewer: DP

Comment:

- a) License condition authorizing generator column disposal, yet no generators are authorized to be possessed on the license.

File No.: 2

Licensee: Syncor Corporation

Location: Springfield, IL

Amendment No.: 16

Date Amendment Issued: 4/16/99

License No.: IL-01220-01

License Type: Nuclear Pharmacy

Type of Action: Termination

License Reviewer: MB

File No.: 3

Licensee: Professional Laundry Management

Location: Gardner, IL

Amendment No.: 15

Date Amendment Issued: 11/20/00

License No.: IL-01942-01

License Type: Nuclear Laundry

Type of Action: Termination

License Reviewer: CV

File No.: 4

Licensee: Barber-Colman

Location: Loves Park, IL

Amendment No.: 2

Date Amendment Issued: 9/21/99

License No.: IL-01005-01

License Type: Manufacturing & Distribution/R&D

Type of Action: Termination

License Reviewer: MB

Comment:

- a) Certificate of Disposition date incorrectly referenced on terminated license (should have been 7/9/99, not 7/7/99 as listed on license).

File No.: 5

Licensee: Trace Photonics

Location: Charleston, IL

Amendment No.: 0

Date Amendment Issued: 4/8/99

License No.: IL-02052-01

License Type: R&D-Specific

Type of Action: New

License Reviewer: DP

File No.: 6

Licensee: Valent Biosciences Corporation

Location: Long Grove, IL

Amendment No.: 0

Date Amendment Issued: 4/18/00

License No.: IL-02094-01

License Type: R&D-Specific

Type of Action: New

License Reviewer: SK

File No.: 7

Licensee: Ordner Well Services

Location: Clay City, IL

Amendment No.: 3

Date Amendment Issued: 7/15/99

License No: IL-01119-01

License Type: Wireline Service

Type of Action: Termination

License Reviewer: DP

File No.: 8

Licensee: Diagnostic Health Services

Location: Bartlett, IL

Amendment No.: 33

Date Amendment Issued: 10/30/00

License No: IL-01397-01

License Type: Mobile Nuclear Medicine

Type of Action: Bankruptcy

License Reviewer: Legal Staff

File No.: 9

Licensee: Pharmacy Services of Peoria

Location: Peoria, IL

Amendment No.: 12

Date Amendment Issued: 7/5/00

License No.: IL-01874-01

License Type: Nuclear Pharmacy

Type of Action: Renewal

License Reviewer: CV

Comment:

- a) This license referenced RG DG-0006 in their previous renewal application. RG DG-0006 is no longer used with issuance of NUREG 1556, Volume 13.

File No.: 10

Licensee: Primex Technologies

Location: Marion, IL

Amendment No.: 9

Date Amendment Issued: 12/17/98

License No.: IL-01209-01

License Type: Product Distribution

Type of Action: Renewal

License Reviewer: TH

File No.: 11

Licensee: Cook County Hospital

Location: Chicago, IL

Amendment No.: 10, 11

Date Amendment Issued: 4/19/98; 10/10/00

License No.: IL-01768-01

License Type: Medical Broad

Type of Action: Renewal, Amendment

License Reviewer: DP

File No.: 12

Licensee: Northwestern University

Location: Evanston, IL

Amendment No.: 7, 8

Date Amendment Issued: 9/9/98; 11/22/99

License No.: IL-01879-01

License Type: Academic Broad A

Type of Action: Renewal, Amendment

License Reviewer: DP

File No.: 13

Licensee: Doctor's Hospital of Hyde Park

Location: Chicago, IL

Amendment No.: 7, 8

Date Amendment Issued: 11/30/98; 7/17/00

License No.: IL-01846-01

License Type: Medical-Private Practice

Type of Action: Amendment, Termination

License Reviewer: MB

File No.: 14

Licensee: Matsushita Industrial Equipment
Comp. of America (MIECOA)
Location: Elmhurst, IL
Amendment No.: 11, 12
Date Amendment Issued: 8/10/98; In Progress

License No.: IL-01112-01
License Type: Instrument Calibration
Type of Action: Renewal/Amendment
License Reviewer: TH, SK

File No.: 15

Licensee: Steris, Inc.
Location: Mentor, OH
Amendment No.: 13, 14 Ci
Date Amendment Issued: 7/17/00; 10/31/00

License No.: IL-01123-02
License Type: Pool Irradiator >10,000
Type of Action: Amendment/Renewal
License Reviewer: SK, DP

Comment:

- a) With the absence of irradiator regulations in Illinois, the staff relies on licensing by standard license condition for renewals.

File No.: 16

Licensee: Gunit Corporation
Location: Rockford, IL
Amendment No.: 3
Date Amendment Issued: 1/27/00

License No.: IL-01616-02
License Type: Industrial Radiography
Type of Action: Amendment
License Reviewer: MB

File No.: 17

Licensee: Radiocat
Location: Springfield, VA
Amendment No.: 3
Date Amendment Issued: 1/22/01

License No.: IL-02024-01
License Type: Veterinary Nuclear Medicine
Type of Action: Amendment
License Reviewer: SK

File No.: 18

Licensee: Solutia
Location: Sauget, IL
Amendment No.: 16
Date Amendment Issued: 3/2/99

License No.: IL-01229-01
License Type: Fixed Gauge
Type of Action: Renewal
License Reviewer: TH

File No.: 19

Licensee: CBI Services Inc.
Location: Plainfield, IL
Amendment No.: 6, 7
Date Amendment Issued: 3/2/99; 10/10/00

License No.: IL-01813-01
License Type: Industrial Radiography
Type of Action: Renewal, Amendment
License Reviewer: SK, TH

File No.: 20

Licensee: Kerr-McGee
Location: West Chicago, IL
Amendment No.: 47-55
Date Amendment Issued: 1/27/98, 3/31/98, 4/30/98, 11/2/98,
2/26/99, 9/29/99, 11/12/99, 2/28/00, 2/28/01

License No.: STA-285
License Type: Thorium Recovery
Type of Action: Amendments
License Reviewer: DP, CH

APPENDIX E

INCIDENT CASEWORK REVIEWS

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

File No.: 1

Licensee: Wayne County Landfill

Site of Incident: Fairfield, IL

Date of Incident: 6/27/97

Investigation Date: 6/30/97

License No.: N/A

Incident Log No.: None (NMED #980156)

Type of Incident: Lost or Stolen Material

Type of Investigation: On-Site

Incident Summary and Final Disposition: The Wayne County Landfill reported that a shipment of household waste alarmed their radiation monitor. The waste was determined to contain I-131. Radiation readings at the surface of the bag were 1.5 mrem/hour. The landfill agreed to hold the waste for decay, but on later investigation, transferred the bag to the hauler (Wayne Berger of Noble, IL).

File No.: 2

Licensee: Lufthansa Airlines

Site of Incident: O'Hare Airport

Date of Incident: 8/1/98

Investigation Date: 8/1/98

License No.: N/A

Incident Log No.: None

Type of Incident: Leaking Source

Type of Investigation: On-Site

Incident Summary and Final Disposition: A package from Russia that was warm to the touch led airline staff to contact the Division. Readings and wipes revealed no contamination. The package contained 3900 Ci of Ir-192. It was concluded that the package was warm to the touch due to decay heat.

File No.: 3

Licensee: XRI Testing

Site of Incident: Oak Brook Terrace, IL

Date of Incident: 2/15/98

Investigation Date: 2/20/98

License No.: IL-01787-01

Incident Log No.: None

Type of Incident: Accidental Exposure

Type of Investigation: Phone

Incident Summary and Final Disposition: XRI was completing a number of radiographic exposures in the offices of Prime Electric. Employees had been notified of the exposures, and XRI staff had completed a thorough walk-down prior to taking any readings to ensure that the offices were vacant. An employee of Prime Electric was unaware of the work and was on-site. Upon finding the employee, XRI halted all testing. A dose assessment of the employee revealed a negligible dose was received.

File No.: 4

Licensee: Rush Presbyterian - St. Luke's Medical Center

Site of Incident: Chicago, IL

Date of Incident: 12/8/99

Investigation Date: 12/9/99

License No.: IL-01766-01

Incident Log No.: None

Type of Incident: Overexposure

Type of Investigation: Phone

Incident Summary and Final Disposition: The husband of a patient receiving a Cs-137 brachytherapy implant refused to leave the room, and thus stayed with the patient overnight and through the day. The husband was informed of all pertinent regulations and possible risks. A

dose analysis revealed that the husband received approximately 156 mrem. A release of liability was obtained from the husband.

File No.: 5

Licensee: Ravenswood Hospital

Site of Incident: Chicago, IL

Date of Incident: 3/9/99

Investigation Date: 3/9/99

License No.: IL-01175-01

Incident Log No.: None (NMED #990399)

Type of Incident: Contamination Event

Type of Investigation: Phone

Incident Summary and Final Disposition: The licensee reported that a 10 mCi I-131 diagnostic capsule spilled as the dosage was being administered. The capsule was cracked and when it was placed into the patient's hand, an unknown quantity spilled onto the floor and around the chair. Decontamination on 3/10/99 was successful and bioassays showed no intake by the nuclear medicine staff. The licensee's corrective action is to use pill administration cups instead of placing the capsules directly into the patient's hands.

Comment:

a) No mention of incident follow up during next inspection.

File No.: 6

Licensee: Melrose Park Transfer Station

Site of Incident: Melrose Park, IL

Date of Incident: 12/12/00

Investigation Date: 12/13/00

License No.: N/A

Incident Log No.: IL010010 (NMED #010207)

Type of Incident: Lost or Stolen Material

Type of Investigation: On-Site

Incident Summary and Final Disposition: The Melrose Park transfer station reported that a load of waste triggered their radiation monitor alarm. Due to severe weather conditions, an inspector could not investigate the monitor trip until the next day. On 12/13/00, an inspector investigated the load responsible for the monitor trip and identified the radionuclide as I-131. Due to the radionuclide involved and the radiation levels observed, the material was allowed to be released for further processing and disposal.

File No.: 7

Licensee: SENCO Construction

Site of Incident: Robinson, IL

Date of Incident: 10/26/00

Investigation Date: 11/1/00

License No.: IL-02002-01

Incident Log No.: IL010005

Type of Incident: Equipment Failure, Overexposure

Type of Investigation: On-Site

Incident Summary and Final Disposition: While performing radiography using an Ir-192 source at a refinery, a radiographer received a possible overexposure when the source was retracted but not locked in the camera. Survey instrumentation indicated background readings, but the radiographer, who was not wearing his alarming dosimeter, noted that the source was not in the "safe" position. The radiographer's dose was estimated to be approximately 560 mrem. No equipment problems were encountered other than dead batteries in the survey meter. A Notice of Violation was issued.

File No.: 8

Licensee: Applied Soil Mechanics, Inc.
Site of Incident: Oak Brook, IL
Date of Incident: 11/19/99
Investigation Date: 11/19/99

License No.: IL-01473-01
Incident Log No.: None (NMED #000086)
Type of Incident: Damaged Equipment
Type of Investigation: On-Site

Incident Summary and Final Disposition: A Humbolt Scientific portable moisture/density gauge was damaged when it was struck by a steam roller at a temporary job site. The gauge contained 10 mCi Cs-137 and a 40 mCi Am-Be source. The Cs-137 rod was severed and dose rates at one foot were greater than 100 mrem/hr. Wipes revealed no contamination. Additional shielding was provided and the gauge was placed in a secure area. The gauge was eventually transferred to Humbolt Scientific. A Notice of Violation was issued.

File No.: 9

Licensee: Minwax
Site of Incident: Flora, IL
Date of Incident: 11/1/99
Investigation Date: 11/3/99

License No.: General License
Incident Log No.: DRM 01-02 (NMED #990842)
Type of Incident: Contamination Event
Type of Investigation: On-Site

Incident Summary and Final Disposition: An individual smashed a tube from a self powered exit sign containing 2 Ci of H-3 inside his residential garage. The garage was surveyed and an estimated dose of 7.1 mrem TEDE was calculated for the man. The employer was not aware that the sign contained radioactive material. A contractor installed the signs and only the newest sign had radiation caution symbols in view. The Division performed an extensive decontamination over the course of several months. The cost of the decontamination was paid by the company.

File No.: 10

Licensee: Provena - St. Joseph Medical Center
Site of Incident: Joliet, IL
Date of Incident: 2/99 and 3/99
Investigation Date: 3/25/99

License No.: IL-01326-01
Incident Log No.: IL-990020 (NMED #990204)
Type of Incident: Misadministration
Type of Investigation: Next Inspection

Incident Summary and Final Disposition: A decay error involving an HDR source resulted in a 31% underdose to three patients. The apparent cause of the misadministrations was the use of the certificate activity of the source instead of the current/decayed activity for the dose planing. The device was a Nucletron Microselectron HDR with an Ir-192 source. The attending physicians were informed of the incidents. One of the three patients was recalled to complete the plan, another was not given additional dose because the physician decided surgery was necessary, and the third was given no additional dose because the pallative treatment was already successful.

Comment:

- a) No mention of incident follow up during next inspection.

File No.: 11

Licensee: Rush Presbyterian - St. Luke's Medical Center

Site of Incident: Chicago, IL

Date of Incident: 10/5/99

Investigation Date: 10/11/99

License No.: IL-01766-01

Incident Log No.: IL000002

Type of Incident: Equipment Failure

Type of Investigation: None

Incident Summary and Final Disposition: A patient was being treated with a Novoste Corporation Beta-Catheter treatment device containing a total of 18 seeds of Sr-90 (56 mCi). At the conclusion of this treatment, staff could not visually verify the presence of all the seeds within the machine. One seed was lodged in machine, but its location could not be determined. Novoste Corporation personnel dismantled the machine and found the seed stuck to a magnet. One of the seeds involved was determined to be damaged. All of the seeds were leak tested and none, including the damaged one, were leaking.

Comment:

- a) No mention of incident follow up during next inspection.

APPENDIX F

SEALED SOURCES AND DEVICE (SS&D) CASEWORK REVIEWS

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

File No.: 1

Registry No.: IL-234-D-102-G

SS&D Type: "C-Arm" or Fixed Arm Thickness Gauge

Manufacturer: E.S.C. Resources, Inc.

Model No.: SH-6090

Date Issued: 4/1/97

Comments:

- a) The registration certificate pages 1-9 show registry number as IL-234-D-102-**G**. Attachments 1-5 of the certificate show the registry number as IL-234-D-102-**S**.
- b) Page 1 of the certificate indicates source isotope as Strontium 90 and source Model as SIF.D1, (Now Medi Physics, Inc. IL-136-S-194-S). Attachment 2 & 3 to the certificate indicate source Model Amersham Model AMC.19 which has not been approved for Strontium 90.
- c) Page 1 of the certificate indicated maximum activity as 100 mCi +25%/ -10%, however, Page 5 indicated maximum radiation distance dose levels for 100 mCi, Strontium 90 sealed source.
- d) Not all dimensions were stated in dual units (Metric & English).
- e) The ANSI N538 rating is shown on page 5 as 33-244-775-R-2. Based on the interpretation of the data provided by the manufacturer, the rating should be 33-244-565-R-2.
- f) The need and the rationale for impact testing prototype three times from a height of six feet was not available.
- g) The second paragraph under the title LIMITATIONS AND CONSIDERATION OF USE should specifically state the safety features to be tested at six month intervals or provide specific references. Paragraph five is redundant and conflicts with paragraph six.
- h) The product maximum size, density, and configuration to be measured, and the weight of the device frame structure was not available from the files; as a result, the impact and severity of the curling forces may not have been fully evaluated.

File No.: 2

Registry No.: IL-136-S-195-S

SS&D Type: Industrial Gauge Source

Manufacturer: Amex-sham Buckler,
Germany & Amex-sham International, PLC, England

Model No.: SIF.P1

Date Issued: 6/10/97

Comments:

- a) Two manufacturers of this source are located in two foreign countries. It was not clear from the files how and who allocated and controlled the serial numbers for the sources.
- b) Under heading of MAXIMUM ACTIVITY, the capsule codes are given specific numbers and some times the capsule drawing numbers, and the certificate requires that licenses be issued to a source Model SIF.P1.
- c) The rationale for testing the source window to 87 PSI was not available from the case files.
- d) The rationale for testing the source window weld as more vulnerable than the weldment imbrittlement zone was not documented.
- e) The information on how and at what intervals the records and documents are forwarded by the foreign manufacturers to the USA distributors was not available.

File No.: 3

Registry No.: IL-234-D-101-G

SS&D Type: "C-Arm" or Fixed Frame Thickness Gauge

Manufacturer: E.S.C. Resources, Inc.

Model No.: SH-6000

Date Issued: 9/25/97

Comments

- a) The registration certificate pages 1-9 show registry number as IL-234-D-101-**G**. Attachments 1-5 of the certificate show the registry number as IL-234-D-101-**S**.
- b) Page 1 of the certificate indicates source isotope as Strontium 90 and source models, Amex-sham Model AMC.19 and Bebig Trade Inc. G44 and G55. Attachment 2 to the certificate indicates source Model Amersham Model AMC.19 only.
- c) Not all dimensions were stated in dual units (Metric & English).
- d) The ANSI N538 rating shown on page as 33-443-**765**-R-2. Based on the interpretation of the data provided by the manufacturer the rating should be 33-443-**585**-R-2.
- e) The need and the rationale for impact testing prototype three times from a height of six feet was not available.
- f) The second paragraph under the title LIMITATIONS AND CONSIDERATION OF USE should specifically state the safety features to be tested at six month intervals or provide specific references. Paragraph five is redundant and conflicts with paragraph six.
- g) The product maximum size, density and configuration to be measured, and the weight of the device frame structure were not available from the files; as a result, the impact and severity of the curling forces may not have been fully evaluated.
- h) The maximum measuring gap of 8 inches is considered accessible. The State has no guidance for the maximum gap accessibility.
- i) Generation and depiction of product run-out was not documented in the files.
- g) Adequate safety instructions were not available related to movement of the gauge from the fixed position for maintenance.
- h) This certificate was issued on 2/15/96, 6/30/97, and again on 9/27/99. There is no indication on these issues as to why the certificate was reissued.

File No.: 4

Registry No.: IL-605-D-105-S

SS&D Type: Line Source Holder/Attenuation
Correction Device

Manufacturer: Siemens Medical System

Model No.: Profile Attenuation Correction System

Date Issued: 2/14/01

Comments:

- a) Not all dimensions were stated in dual units (Metric & English).
- b) The certificate was amended in its entirety. Addition of a new supplier and related model was obvious; however, it was not easy to decipher as to what other changes were made to the certificate (i.e., number of pages changed from 7 to 8).
- c) Spring operated shutter maximum, measured, and required tension setting at various temperatures were not available (i.e., at what temperature the spring tension will not be adequate to shut the shutter on a loss of power).
- d) It was not clear as to how source shutter 0.22" maximum stroke and closing time of 500 msec was assimilated in the prototype testing. The initial application stated 750,000 shutter test cycles were replaced by 187,000, of which 88,000 were done at an elevated temperature. Under PROTOTYPE TESTING heading, the number of cycles tested are indicated as 223,600.
- e) A accident report was filed in this application.
- f) Although not indicated in the certificate, the review of the file indicated that readings taken by the Micro R Ion Chamber were corrected by using an appropriate absorber. The dose readings appearing under heading MAXIMUM RADIATION LEVELS in FSv/hr should be stated as mrem/hr and not mR/hr.

File No.: 5

Registry No.: IL-495-D-801-S

SS&D Type: Therapeutic Sealed Source

Manufacturer: Molesgaard Medical, Denmark

Model No.: ND 1100

Date Issued: 5/21/99

File No.: 6

Registry No.: IL-103-S-110-S

SS&D Type: Therapeutic Sealed Source

Manufacturer: BEBIG Isotopentechnik
Und Umweltdiagnostik, Germany

Model No.: 125.S06

Date Issued: 5/25/99

Comments:

- a) Not all dimensions were stated in dual units (Metric & English).
- b) 10 CFR 20.203 is an incorrect reference for label requirements.
- c) Sv/hr is a biological dose rate and its equivalent is mrem/hr.

File No.: 7

Registry No.: IL-1082-S-102-S

SS&D Type: High Energy Gamma Source

Manufacturer: REVISS Services (UK) Limited

Model No.: R6000

Date Issued: 9/28/99

Comments:

- a) IL-1082-S-102-S supersedes IL-136-S-197-S. This appears this is a new certificate, yet is categorized as AMENDED IN ITS ENTIRETY.
- b) Under title DESCRIPTION, it is stated, "Models CDC.PE1 and CDC.PE2 which were formerly included in this directory have been inactivated." As some of these models may still be operating under licenses previously issued, the description could have stated the production and distribution of these models was discontinued, as well as the serial number and date on which the distribution of these models was discontinued in USA.
- c) Maximum source activity is shown on page 1 of the certificate as 3,500 Ci, Cesium-137. A note under Table 1 states, ".." activity +/- 10% not to exceed maximum. The table shows an activity of 3500 for Model R6060. Under LABELING, the nominal activity is shown as +/- 20%. Furthermore, the activity for model R6060 is shown as 2200 Ci.

File No.: 8

Registry No.: IL-136-S-338-S

SS&D Type: Therapeutic Sealed Source

Manufacturer: Medi-Physics, Inc.

Model No.: 6711

Date Issued: 5/31/00

Comments:

- a) Not all dimensions were stated in dual units (Metric & English)
- b) 10 CFR 20.203 is an incorrect reference for label requirements
- c) Under PROTOTYPE TESTING, ANSI N43.6-1977 is incorrectly stated. The correct reference is ANSI 43.6-1997.
- d) The application is made by Nycomed Amersham and the certificate has been issued to Medi-Physics Inc.

File No.: 9

Registry No.: IL-1083-D102-G

SS&D Type: Beta Gauge

Manufacturer: TAPIO Technologies, Finland

Model Nos.: BW-2h55 and BW-5h23

Date Issued: 9/1/00

Comments:

- a) 1000 shutter cycle test seems unnecessary.
- b) First paragraph of the SAFETY ANALYSIS is not clear. (Washington License)
- c) On Page 7, the regulatory requirement packages associated with the general license should be supplied by the distributor or the manufacturer to the end user.
- d) The files did not address the sequence of events on paper-run out.
- e) The registration certificate is for a General License. The registration certificate did not contain a statement that removal of the label is prohibited. The applicant has submitted a label sample that included the statement that the removal of the label is prohibited. This certificate is undergoing a revision.

File No.: 10

Registry No.: IL-422-D-101-S

Manufacturer: Lixi, Inc.

Date Issued: 9/22/00

SS&D Type: Portable Fluoroscope
Model Nos.: LS-80X, LS-82X, LSM-80X
or LSM-82X Where, X=1,2,3..

Comments:

- a) Not all dimensions were stated in dual units (Metric & English).
- b) 10 CFR 20.203 is an incorrect reference for label requirements.
- c) This certificate deleted all references to the correspondence and the enclosures prior to the re-application of December 1993. The certificate continues to refer to the draft of ANSI N432 although this standard was finalized and reissued. The rationale for the removal of previous referenced documents from the registry and the case files was not available.

File No.: 11

Registry No.: IL-422-S-102-S

Manufacturer: Lixi, Inc.

Date Issued: 9/22/00

SS&D Type: Low Energy Photon Source
Model No.: C-381

Comments:

- a) Not all dimensions were stated in dual units (Metric & English).
- b) The year of ANSI N43.6 is given as 1977; it should be 1997 (see pages 3 and 5 of the certificate).
- c) As a foreign vendor, Nordion is not required to have offices in USA. Although Nordion inspections are conducted solely by NRC Region 1, this source is specifically manufactured by Nordion-Canada for a specific Lixi Device. The Department reviewed both the source and the device and Lixi is responsible for Nordion's activities related to the fabrication and manufacture of sources in Canada.

Attachment

April 30, 2001 Letter from Thomas W. Ortziger
Illinois' Response to Draft IMPEP Report
ML011230448

STATE OF ILLINOIS ^{OSP}
DEPARTMENT OF NUCLEAR SAFETY

1035 OUTER PARK DRIVE • SPRINGFIELD, ILLINOIS 62704
217-785-9900 • 217-782-6133 (TDD)

George H. Ryan
Governor

Thomas W. Ortziger
Director

April 30, 2001

Mr. Paul Lohaus, Director
Office of State and Tribal Programs
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

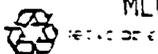
Dear Mr. Lohaus:

The purpose of this letter is to respond to your letter dated April 10, 2001, and the Draft Report of the Integrated Materials Performance Evaluation Program (IMPEP) Review of Illinois Agreement State Program, March 5-9, 2001. With one exception, we view the results of our recent IMPEP review positively. Ms. McLean is to be commended for her cooperative and constructive attitude, in addition to the professional effort expended by the entire IMPEP team. Unfortunately, NRC chose to go beyond its comments and recommendations offered at our exit meeting and included an additional "recommendation" that to us seems unnecessary, unsupported and unwarranted. We expect after serious consideration of our comments, appropriate changes to the final report will reflect a more reasoned program evaluation.

As you know, we take issue with the "recommendation" on Page 17 related to training. There was only a brief mention during the exit briefing with Department staff on March 8, and we do not recall its mention at the management exit meeting the following day. We presumed that NRC would have at that time identified all issues to which IDNS would be expected to respond. We are vexed by your inclusion of what appears to be an inconsequential comment on the topic of training that NRC surely recognizes as contentious.

A documented and detailed training program exists for IDNS materials license reviewers and the review team was aware it is our intent that a similar program be established prior to hiring of any new inspection staff. We are perplexed by what happened during the review team's preparation of the Draft Report to elevate this issue to a written recommendation. If the topic had been discussed during the IMPEP visit, we would have provided all the information attached to this letter, which clearly demonstrates the exhaustive training and refresher training that is provided to all of our staff on a regular basis. Notably, this has been accomplished in spite of NRC's failure to

ML011230448



Mr. Paul Lohaus, Director
Page 2
April 30, 2001

continue providing for essential training of agreement state personnel as it had prior to 1998. It seems moderately disingenuous for NRC to tell Agreement States to provide for their own training, while maintaining an apparently stringent critical view extending to even precisely what refresher training is necessary. Curiously, while fostering this policy, NRC has no compunction in shortchanging Agreement States in the training area.

As a recent demonstration, a useful training opportunity for refresher training was extended to our staff for NRC's H-304 Therapeutic Nuclear Medicine training course at NRC Regional Headquarters in Lisle, Illinois. We found this an opportunity to send all interested IDNS staff without incurring out-of-state travel expenses. However, at the last minute we were informed that Illinois could only have two slots for this valuable training! Alternatively, a videotape of the instruction will be provided for the remainder of our staff. This was disappointing as it was a unique opportunity for the apparently critical refresher training that your report alleges is lacking in our program. What is more frustrating is that we have provided training to NRC and other states on behalf of NRC concerning sealed source and device evaluations and related topics. We currently have additional training scheduled by members of our staff for NRC and states concerning sealed source and device evaluations and management of unwanted radioactive materials. It is now probably in our interest to defer any such training so that our staff has the time to obtain the specific refresher training that NRC seems to have in mind.

We surmise that the training recommendation was suddenly elevated in importance only because we do not have a procedure that includes the words "refresher training" for our staff. This seems contradictory to your letter of April 10, 2001, wherein you state, "All reviews use common criteria in the assessment and place primary emphasis on performance."(emphasis added). We are certain that any reasonable person reviewing the attached documented additional training received by our staff during the review period will readily conclude that the "refresher training" provided regularly to all staff is impressive, and exceeds that necessary to perform their functions.

Also, the recommendation refers to the NRC/OAS Training Working Group Report. Indeed, we are familiar with that report, Appendix D, which states in referring to Agreement State Training Policy, "Refresher training will be provided, as needed." This is exactly what we provide our staff. Again, performance should be used to assess this element, and no one seems able to point to staff performance issues that result from a lack of refresher training. It was not only incorrect but improper to include this recommendation in the draft report.

Mr. Paul Lohaus, Director

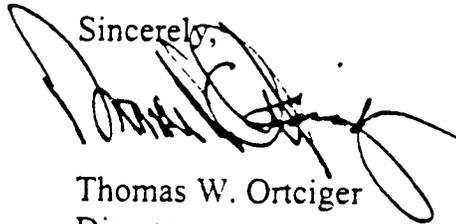
Page 3

April 30, 2001

Since volunteering to be one of the original states reviewed under this improved process, we have supported the notion of a fair, informed and cooperative review of both States and NRC Regions. Do not denigrate our mutual efforts by insisting on maintaining a recommendation that is unnecessary, unsupported and unwarranted. Insisting on maintaining this recommendation can only serve to seriously erode the positive and constructive nature of the IMPEP review.

The attachment to this letter presents specific comments and responses to the draft report for your consideration. We are looking forward to the Management Review Board meeting on May 21, 2001. We believe that after reflection on the matter you will agree that the training recommendation should be removed. If you have any questions regarding these comments, please contact Joe Klinger at (217)785-9930.

Sincerely,

A handwritten signature in black ink, appearing to read 'Thomas W. Ortziger', written over the word 'Sincerely,'.

Thomas W. Ortziger
Director

TWO:jgk

Enclosures

cc: Jim Lynch, State Agreements Officer

Specific Comments on the Draft Report of the IMPEP Review
Conducted March 5-9, 2001, of IDNS

1. First paragraph, 4th sentence of the April 10, 2001 letter transmitting the draft report, states, "The review team's recommendations were discussed with you ... review." There was no recommendation discussed regarding training concerns on the part of the IMPEP team.
2. Page 3, 2nd paragraph, 2nd sentence, states, " The Division's policy requires the findings to be dispatched within 30 days following the inspection." The first part of the sentence needs to be changed to, "The Division has a goal that the findings ...inspection."
3. Page 5, last two paragraphs: The penultimate paragraph acknowledges that a complete and updated written training program based on the NRC/Organization of Agreement States (OAS) Training Working Group Report was established for use by the materials license reviewer hired during the review period. The report continues, "The review team found the program acceptable for his training. The Division Director (should be changed to Division Chief) stated that a similar program would be created if a new inspector were hired." We have no problem with this paragraph, and we were informed by the IMPEP team that this satisfied any concerns about a documented training program for the Division. However, the first sentence in the last paragraph on page 5, states that, "One topic included in the NRC/OAS report that was lacking in the Division's training program was refresher training." The report then discusses the importance of refresher training and its advantages. We do not disagree with the importance and advantages of refresher training and we spend enormous resources to provide such training routinely. We have an extremely aggressive refresher training program as evidenced by the information contained in Appendix A. This is a listing of all the training accomplishments for our staff. We could have provided this information during the IMPEP visit if asked, but it was not. It astounds us that something that is barely mentioned during the IMPEP visit becomes one of two recommendations in the Draft IMPEP report. This is unacceptable and undermines the constructive efforts of the IMPEP review. Fortunately, the review team recommended that Illinois' performance with respect to the indicator, Technical Staffing and Training, was found to be satisfactory. Unfortunately, the recommendation concerning this item appears on page 17 in the Summary Section of the Draft Report as one of only two recommendations for the entire IMPEP review. This Recommendation should be deleted from the Report.

4. Page 8, 4th paragraph, 6th line: " The procedure details the responsibilities of the RDO, a rotating position within the Division ...response." The word "Division" should be changed to "Department" in this sentence.
5. Page 8, 5th paragraph, 1st sentence: Due to the Division not differentiating between incidents and allegations and the lack of an internal incident tracking system prior to 1999, the review team was unable to determine how many...Events." Prior to 1999, we had an internal tracking system that worked quite well. However, we finally succumbed to the desires of NRC and terminated use of our existing database and converted to sole use of the NMED program, even with all its nuances and inadequacies. If we had not done so we could have continued use of our system and readily provided the information necessary for review.
6. Page 9, penultimate sentence, 2nd paragraph, states, "The Department's procedures for handling incidents are incomplete in terms of handling "allegations." We do treat incidents the same and the sentence before the penultimate acknowledges that the Division took appropriate action on all allegations, including "responding to the allegers when appropriate." Therefore, the performance of the Division was appropriate and satisfactory and, even though the procedure for incidents does not address all items concerning "allegations", the review team found this criteria satisfactory without any associated "recommendation." This is consistent with the performance-based approach of IMPEP and should have been used in the Technical Staff Training criteria.
7. Page 11, first bullet regarding "Radiological Criteria for License Termination": A sentence should be added that states, "The 25 mrem criteria is currently enforced through licensing and termination procedures." Because this requirement is enforced by the Division, by "other legally binding requirements,", this item should not count as one of the four regulations referenced on Page 13 that have not been adopted within three-years of NRC rules and should be moved to Page 12 under the "compatible legally binding requirement" header.
8. Page 11, 2nd paragraph: We provided all the information concerning the Department's exemption process allowing release of patients administered radioactive material on a case-by-case basis. We suggest adding, "NRC will contact the state when its evaluation is completed." as the last sentence to this paragraph.
9. Page 17, Recommendation 1. at the bottom of the page: delete this recommendation!

RESPONSE TO ILLINOIS COMMENTS TO THE DRAFT IMPEP REPORT

Comment 1:

First paragraph, 4th sentence of the April 10, 2001 letter transmitting the draft report, states, "The review team's recommendations were discussed with you ... review." There was no recommendation discussed regarding training concerns on the part of the IMPEP team.

Response:

Based on this comment, we will revise the boilerplate letter that accompanies draft IMPEP reports to state that: "The review team's preliminary findings were discussed..." (emphasis added). This language better describes the information discussed on-site and allows for cases when preliminary findings are revised such as the addition of a recommendation. There will be no change to the report based on this comment.

Comment 2:

Page 3, 2nd paragraph, 2nd sentence, states, "The Division's policy requires the findings to be dispatched within 30 days following the inspection." The first part of the sentence needs to be changed to, "The Division has a goal that the findings... inspection."

Response:

We agree with this comment and the report will be revised accordingly.

Comment 3:

Page 5, last two paragraphs: The penultimate paragraph acknowledges that a complete and updated written training program based on the NRC/Organization of Agreement States (OAS) Training Working Group Report was established for use by the materials license reviewer hired during the review period. The report continues, "The review team found the program acceptable for his training. The Division Director (should be changed to Division Chief) stated that a similar program would be created if a new inspector were hired." We have no problem with this paragraph, and we were informed by the IMPEP team that this satisfied any concerns about a documented training program for the Division. However, the first sentence in the last paragraph on page 5, states that, "One topic included in the NRC/OAS report that was lacking in the Division's training program was refresher training." The report then discusses the importance of refresher training and its advantages. We do not disagree with the importance and advantages of refresher training and we spend enormous resources to provide such training routinely. We have an extremely aggressive refresher training program as evidenced by the information contained in Appendix A. This is a listing of all the training accomplishments for our staff. We could have provided this information during the IMPEP visit if asked, but it was not. It astounds us that something that is barely mentioned during the IMPEP visit becomes one of two recommendations in the Draft IMPEP report. This is unacceptable and undermines the constructive efforts of the IMPEP review. Fortunately, the review team recommended that Illinois' performance with respect to the indicator, Technical Staffing and Training, was found to be satisfactory. Unfortunately, the recommendation concerning this item appears on page 17 in the Summary Section of the Draft Report as one of only two recommendations for the entire IMPEP review. This Recommendation should be deleted from the Report.

Response:

We agree with that comment that "Division Director" should be changed to "Division Chief."

The review team acknowledges that refresher training is indeed provided by the Division and appreciates the materials submitted with the Division's reply to the draft IMPEP report. Recommendations involving written training programs, however, are not uncommon in IMPEP reports. Similar recommendations have been made in at least a dozen past IMPEP reviews and final reports. Although this topic was not initially discussed as a recommendation during the on-site review, the review team believes that recommending a general written training program follows past IMPEP policy and consistent with the NRC/OAS Training Working Group Recommendations for Agreement State Training Programs. Thus, though the last paragraph on page 5 will be revised as noted below, the review team believes that the MRB should decide if this recommendation should be included in the final report.

Discussions with staff members confirmed that though inspectors and license reviewers are confident in their training to perform assigned tasks, supplemental or refresher training would be beneficial for experienced staff members. The advantages of this type of training was discussed with Division management, especially with the increased emphasis on performance-based inspections. In their April 30, 2001 reply to the draft IMPEP report, the Division enclosed details of staff refresher training. The review team acknowledges that the Division does indeed focus resources on refresher training, however the Division does not have a documented training program for all technical staff. The review team recommends that the Division establish a documented training program including refresher training for technical staff as recommended in the NRC/OAS Training Working Group Report.

Comment 4:

Page 8, 4th paragraph, 6th line: "The procedure details the responsibilities of the RDO, a rotating position within the Division. ..response." The word "Division" should be changed to "Department" in this sentence.

Response:

We agree with this comment and the report will be revised accordingly.

Comment 5:

Page 8, 5th paragraph, 1st sentence: Due to the Division not differentiating between incidents and allegations and the lack of an internal incident tracking system prior to 1999, the review team was unable to determine how many. ..Events." Prior to 1999, we had an internal tracking system that worked quite well. However, we finally succumbed to the desires of NRC and terminated use of our existing database and converted to sole use of the NMED program, even with all its nuances and inadequacies. If we had not done so we could have continued use of our system and readily provided the information necessary for review.

Response:

The review team agrees that this language does not correctly reflect the circumstances describe. The phrase "and the lack of an internal incident tracking system prior to 1999," will be removed

from the report. We appreciate the effort that the Division puts forth to participate in the NMED program.

Comment 6:

Page 9, penultimate sentence, 2nd paragraph, states, "The Department's procedures for handling incidents are incomplete in terms of handling "allegations." We do treat incidents the same and the sentence before the penultimate acknowledges that the Division took appropriate action on all allegations, including "responding to the allegers when appropriate." Therefore, the performance of the Division was appropriate and satisfactory and, even though the procedure for incidents does not address all items concerning "allegations", the review team found this criteria satisfactory without any associated "recommendation." his is consistent with the performance-based approach of IMPEP and should have been used in the Technical Staff Training criteria.

Response:

There will be no revision to the report based on this comment.

Comment 7:

Page II, first bullet regarding "Radiological Criteria for License Termination:" A sentence should be added that states, "The 25 mrem criteria is currently enforced through licensing and termination procedures." Because this requirement is enforced by the Division, by "other legally binding requirements," this item should not count as one of the four regulations referenced on Page 13 that have not been adopted within three-years of NRC rules and should be moved to Page 12 under the "compatible legally binding requirement" header.

Response:

We agree that this rule should not be included in the list of those regulations not adopted within three years of the NRC rule and the report will be revised accordingly. Either the Division's process noted here or the draft rule needs to be evaluated by NRC following STP Procedure SA-201.

Comment 8:

Page II, 2nd paragraph: We provided all the information concerning the Department's exemption process allowing release of patients administered radioactive material on a case-by-case basis. We suggest adding, "NRC will contact the state when its evaluation is completed." as the last sentence to this paragraph.

Response:

We agree with this comment and the report will be revised accordingly.

Comment 9:

Page 17, Recommendation 1. at the bottom o f the page: delete this recommendation!

Response:

See our response to Comment 3.

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

QUESTIONNAIRE

ILLINOIS DEPARTMENT OF NUCLEAR SAFETY
Reporting Period: April 1, 1997 to February 1, 2001

A. COMMON PERFORMANCE INDICATORS

I. Status of Materials Inspection Program

1. Please prepare a table identifying the licenses with inspections that are overdue by more than 25% of the scheduled frequency set out in NRC Inspection Manual Chapter 2800. The list should include initial inspections that are overdue.

<u>Licensee Name</u>	<u>Insp. Frequency (Years)</u>	<u>Due Date</u>	<u>Months O/D</u>
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There are no radioactive materials inspections overdue.

2. Do you currently have an action plan for completing overdue inspections? If so, please describe the plan or provide a written copy with your response to this questionnaire.

N/A

3. Please identify individual licensees or groups of licensees the State/Region is inspecting more or less frequently than called for in NRC Inspection Manual Chapter 2800 and state the reason for the change.

There are no individual licensees or groups of licensees that the Department inspects less frequently than identified in NRC's IMC 2800. One licensee (IL-01347-01) is inspected on a six-month frequency.

¹ Estimated burden per response to comply with this voluntary collection request: 45 hours. Forward comments regarding burden estimate to the Information and Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0183), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

4. Please complete the following table for licensees granted reciprocity during the reporting period.

Priority	Number of Licensees Granted Reciprocity Permits Each Year	Number of Licensees Inspected Each Year
Service Licensees performing teletherapy and irradiator source installations or changes	1997 – 5 1998 – 6 1999 – 7 2000 – 6	1997 – 2 1998 – 1 1999 – 0 2000 – 5
1	1997 – 7 1998 – 11 1999 – 4 2000 – 8	1997 – 4 1998 – 2 1999 – 3 2000 – 5
2	1997 – 5 1998 – 2 1999 – 3 2000 – 3	1997 – 0 1998 – 1 1999 – 1 2000 – 0
3	1997 – 16 1998 – 9 1999 – 12 2000 – 11	1997 – 1 1998 – 0 1999 – 0 2000 – 0
4	N/A	N/A
5	1997 – 19 1998 – 21 1999 – 20 2000 – 14 2001 – 1	1997 – 0 1998 – 1 1999 – 0 2000 – 1 2001 – 0

5. Other than reciprocity licensees, how many field inspections of radiographers were performed?

During the reporting period, 23 field inspections of radiographers were performed (there were a total of 74 radiography inspections conducted on 19 active licensees for this period).

6. For NRC Regions, did you establish numerical goals for the number of inspections to be performed during this review period? If so, please describe your goals, the number of inspections actually performed, and the reasons for any differences between the goals and the actual number of inspections performed.

N/A

II. Technical Quality of Inspections

7. What, if any, changes were made to your written inspection procedures during the reporting period?

For the Radioactive Materials Program:

No changes were made to the written inspection procedures during this reporting period.

For the Low-Level Radioactive Waste Disposal Program:

No changes made.

For the Uranium Recovery Program:

No changes made.

8. Prepare a table showing the number and types of supervisory accompaniments made during the review period. Include:

For Inspection and Enforcement

<u>Inspector</u>	<u>Supervisor</u>	<u>License Cat.</u>	<u>Date</u>
RGM	ASG	Specific Medical	4/24-28/97
GEM	SCC	Broad Medical	11/19-20/97
JBK	ASG	Spec Manuf/Fxd Gauge	11/19-21/97
ASG	BJS	Specific Medical	12/3/97
JBK	ASG	Open Irr >10K Ci	2/24/98
WMH	BJS	Specific Medical	2/24-25/98
RGM	ASG	Specific Medical	4/30/98
JDP	ASG	Specific Medical	10/13/98
GEM	BJS	Nuclear Pharmacy	10/29/98
WMH	ASG	Specific Manuf	11/10/98
ASG	BJS	Specific Medical	11/12/98
BJS	JGK	IDNS	1/26-29/99
JBK	ASG	Academic-A, Broad	2/4/99
RGM	PDE	Portable Gauge	3/3/99
RGM	ASG	Broad Medical	4/12-14/99
RGM	ASG	Specific Manuf	6/30/99
RGM	ASG	Broad Medical	9/27-29/99
GEM	BJS	Specific Medical	10/28/99
WMH	ASG	Specific Medical	11/9/99
RGM	BJS	Academic-A, Broad	11/8-10/99
JDP	ASG	Specific Medical	11/16/99
ASG	BJS	Portable Gauge	11/30/99

GEM	BJS	Portable Gauge	3/6/00
JDP	ASG	Waste Processing	4/5-6/00
RGM	ASG	Academic-A, Broad	6/5-7/00
JBK	TJS	Specific Manuf	8/23/00
JDP	TJS	Ind Radiography	8/24/00
WMH	TJS	Portable Gauge	8/29/00
JDP	ASG	R&D-A, Broad	10/17/00
GEM	TJS	Ind Radiography	11/1/00
JBK	ASG	Ind Radiography	1/29/01
WMH	ASG	Portable Gauge	1/30/01

ASG – Andrew S. Gulczynski
 BJS – Bruce J. Sanza
 GEM – George E. Merrihew
 JBK – Joanne B. Kark
 JDP – John D. Pappendorf

JGK – Joe G. Klinger
 PDE – Paul D. Eastvold
 SCC – Steve C. Collins
 TJS – Tom J. Seif
 WMH – Wendell M. Hickman

For the Low-Level Radioactive Waste Disposal Program:

N/A

For the Uranium Recovery Program:

During this review period, annual inspections of the mill tailings facility were performed by Springfield personnel. In addition, there is a resident inspector at the Kerr-McGee factory site. Daily communication with this inspector and the supervisor helps to ensure that all requirements are enforced. Also, monthly meetings between IDNS licensing staff (including supervisory staff) and Kerr-McGee senior staff aid in ensuring that all requirements are properly enforced. Minutes of these meetings are prepared and distributed widely. A copy of the minutes is maintained for public access in the Public Document Room in West Chicago.

Annual inspections were conducted on the Kerr-McGee project on the following dates. (Due to the unique nature and extent of decommissioning activities on this project, and depth of inspection report documentation, notification of results of the inspection to the licensee within 30 days is not viable.)

Inspection Period

Feb 23-27, 1998
 March 23-26, 1999
 April 19-21, 2000

Notice to Licensee

June 3, 1998 (66 days)
 May 3, 1999 (38 days)
 May 24, 2000 (33 days)

9. Describe internal procedures for conducting supervisory accompaniments of inspectors in the field. If supervisory accompaniments were documented, please provide copies of the documentation for each accompaniment.

For Inspection and Enforcement:

Supervisory accompaniments are conducted annually. A standard form to document accompaniments is routinely used by the supervisors. We maintain a file of these completed forms. However, since they are not available in electronic format, we will have them ready for IMPEP team review during the March 5-9 visit.

For Low-Level Radioactive Waste Disposal Program:

N/A

For the Uranium Recovery Program:

In the Mill Tailings area, we have a resident inspector at the Kerr-McGee site. Annual inspections, however, are performed by Springfield headquartered personnel.

10. Describe or provide an update on your instrumentation and methods of calibration. Are all instruments properly calibrated at the present time?

There have been no changes to the Department's instrumentation types, availability, or calibration methods during this reporting period. All instruments currently in use, or available for use, are properly calibrated at the present time.

III. **Technical Staffing and Training**

11. Please provide a staffing plan, or complete a listing using the suggested format below, of the professional (technical) person-years of effort applied to the agreement or radioactive material program by individual. Include the name, position, and, for Agreement States, the fraction of time spent in the following areas: administration, materials licensing & compliance, emergency response, LLW, U-mills, other. If these regulatory responsibilities are divided between offices, the table should be consolidated to include all personnel contributing to the radioactive materials program. Include all vacancies and identify all senior personnel assigned to monitor work of junior personnel. If consultants were used to carry out the program's radioactive materials responsibilities, include their efforts. The table heading should be:

Name	Position	Area of Effort	FTE%
Thomas Ortziger	Director	Administration	20
Gordon Appel	Deputy Director	Administration	20
Paul Eastvold	Manager	Administration	50
Steve Collins	Assist. Manager	Administration	50
Kathy Allen	Sr. Project Manager	Administration	50
Joe Klinger	Division Chief	Administration	100
Mike Ewan	Assist. to Div. Chief	Administration, General Licensing	100
Gibb Vinson	Materials Licensing Section Head	Materials Licensing, Supervision	100
Mary Burkhart	Materials License Reviewer	Materials Licensing	100
Sandi Kessinger	Materials License Reviewer	Materials Licensing	100
Daren Perrero	Materials License Reviewer	Materials Licensing	100
Ted Henry	Materials License Reviewer	Materials Licensing	100
Gary McCandless	LLRW & Site Decommissioning Section Head	LLRW Licensing, Supervision	100
John Barcalow	LLRW License Reviewer	LLRW Licensing	100
Kelly Grahn	W. Chicago On-Site Resident Inspector/ LLRW License Reviewer	Inspection, Licensing	100
David Price	LLRW License Reviewer	LLRW Licensing	100
Chris Halladay	LLRW License Reviewer	LLRW Licensing	100
Tom Seif	Insp. & Enforc. Head	Insp. & Enforc., Supervision	100
Andy Gulczynski	Reg. Insp. Supervisor	Insp. & Enforc., Supervision	100
Robin Muzzalupo	Inspector	Insp. & Enforc.	100
Wendell Hickman	Inspector	Insp. & Enforc.	100
George Merrihew	Inspector	Insp. & Enforc.	100
John Papendorf	Inspector	Insp. & Enforc.	100
Joanne Kark	Inspector	Insp. & Enforc.	100

For Sealed Source & Device Program:

<u>Name</u>	<u>Position</u>	<u>Area of Effort</u>	<u>FTE%</u>
Gibb Vinson	Materials Licensing Section Head	Materials Licensing, Supervision	10%
Mary Burkhart	Materials License Reviewer	Materials Licensing	10%
Sandi Kessinger	Materials License Reviewer	Materials Licensing	10%
Daren Perrero	Materials License Reviewer	Materials Licensing	10%

<u>CONSULTING CO. NAME</u>	<u>AREA OF EFFORT</u>	<u>FTE%</u>
1. Hanson Engineers, Inc.	Engineering technical support for license review and evaluation and construction oversight of decommissioning activities at Kerr-McGee's W. Chicago facility.	Approx. 35 individuals totaling 9 FTE (FY00)

Subcontractors:

Dames & Moore, Inc.	Health Physics
Duke Engineering & Services	Hydrology & Geotechnical
REM, L.L.C.	Sampling and Verification Studies

12. Please provide a listing of all new professional personnel hired since the last review, indicate the degree(s) they received, if applicable, and additional training and years of experience in health physics, or other disciplines, if appropriate.

Theodore L. Henry Associate in Science, Lincoln Land Community College (Environmental Engineering), 1971; B.A. Sangamon State University (Biology) 1973; M.A. Sangamon State University (Physics) 1989; Seven years with the Department as Project Scientist LLRW Siting Program, OES. Three years with Department as License Reviewer, ORS.

Thomas J. Seif B.S. Ohio Northern University (Biology), 1985. Fifteen years experience in a government radiological regulatory capacity (eight with the Department), of which five years

consisted of RAM inspections and supervision of RAM inspectors.

For Sealed Source & Device Program:

None.

13. Please list all professional staff who have not yet met the qualification requirements of license reviewer/materials inspection staff (for NRC, Inspection Manual Chapters 1246; for Agreement States, please describe your qualifications requirements for materials license reviewers and inspectors). For each, list the courses or equivalent training/experience they need to attend and a tentative schedule for completion of these requirements.

All professional staff are fully trained to perform the duties currently assigned. See following chart for the status of professional staff training.

For Sealed Source & Device Program:

All staff fully trained for SS&Ds.

DRM TRAINING COURSE TRACKING SHEET

Updated December 5, 2000

NAME	LICENS	INSPECT.	NUC MED	BRACII/ TELETH.	IND RADIOG	WELL LOC.	TRANSP.	GAUGES (TROX.)	5-WEEK COURSE	2-WEEK COURSE	RERO	RAD ENG.	SPEC. TOPICS	HPS MTG/ SCHOOL
M. Burkhardt	1991	1992	1991	**	1995	1992	1991	1991	1993			1993	91	
M. Ewan	1984					1984	1985		1985					
A. Gulczynski		1983	1984	**	1983		1985	1988	1986		1983	1988	90	88
T. Henry	1998		1999		2000				2000					
W. Hickman		1996	1991	1996	1998		1996				1992			
J. Kark		1986	1988	**	1989	1991	1987	1988			1993	1991		90, 94, 97
S. Kessinger	1992	1994	1991	**	1992	1993	1990	1991	1992		1998	1993		94
J. Klinger	1981	1981	1986		1982	1981	1995		1985				90, 91, 92	89, 97
G. Merrihew	1984	1984	1986	**	1985	1985	1985		1984		1986	1992	89	
R. Muzzalupo		1987	1989	**	1988		1987		1986		1986	1991		88, 93
J. Papendorf		1980	1988	**	1991	1989	1984, 1985	1988	1986		1995	1991		
D. Perrero	1993	1993	1992	**	1993	1994	1994	1987	1996		1979		89	
T. Seif	*	*	1992							1995	1998			98
G. Vinson	1985	1986	1987	**	1987	1990	1992	1991	1990		1987			
J. Barcalow	1995	1995									1988	1987	91	
K. Grahm									*					
C. Halladay	1998								*					
G. McCandless	1998	1994							1995					
D. Price	1982	1983	1982		1982	1983			1982		1984	1984		

* REPRESENTS NOMINATION TO ATTEND INDICATED COURSE

- Plan Seif Licensing, 9/10>9/14/01, Chattanooga
- Plan Seif Inspection Procedures, 9/17>9/21/01, Chattanooga (IMPEP Review 3/01)
- Plan Henry 5-Week Course, 3/5>4/6/01, Oak Ridge
- Plan Barcalow 1-Week HP, 7/16>7/20/01, Rockville
- Plan Halladay 1-Week HP, 7/16>7/20/01, Rockville

** Indicates attendance at a 2-day Brachytherapy Workshop in November 1995

*** One-week NRC HP course.

14. Please identify the technical staff who left the RCP/Regional DNMS program during this period.

For Inspection & Enforcement:

Bruce Sanza.

For Sealed Source & Device Program:

Gibb Vinson left SS&D program for promotion to Materials Licensing Section Head. However, he still is very actively involved in the SS&D program but primarily providing supervisory technical review.

15. List the vacant positions in each program, the length of time each position has been vacant, and a brief summary of efforts to fill the vacancy.

No vacancies currently exist.

For Sealed Source & Device Program:

No vacant positions at this time.

IV. Technical Quality of Licensing Actions

16. Please identify any major, unusual, or complex licenses which were issued, received a major amendment, were terminated, decommissioned, submitted a bankruptcy notification or renewed in this period. Also identify any new or amended licenses that now require emergency plans.

For Materials Licensing:

See table on following pages.

Completed Actions

LicNbr	Facility Name	Assgn	Action	LicAmApp	Description
860147001	General Electric Morris Operation	CGV	Amendment	22-Apr-97	Decontamination Facilities
860113002	Siemens Medical Systems, Inc.	DMP	Renewal	28-May-97	Broad Scope Manufacturing & Distribution
860176602	Rush-Presbyterian-St. Luke's	SMK	Termin/Com bina	31-Jul-97	Medical/Veterinary Use, including Teletherapy and/or High Dose Rate Remote Afterloaders
860184301	Heritage Environmental Services, Inc.	DMP	Termination	26-Aug-97	Service (such as instrument calibration, source leak testing and laboratory analysis)
860170002	Chem-Nuclear Systems, Inc.	GW M	Renewal	29-Sep-97	Low-Level Radioactive Waste Treatment Facilities
860150001	Commonwealth Edison Company	SMK	Renewal	12-Nov-97	Broad Scope Research & Development
860156301	IIT Research Institute	SMK	Renewal	16-Dec-97	Broad Scope Research & Development
860122001	Sterigenics	SMK	Renewal	29-Dec-97	Dry or Pool-Type Open Gamma Irradiator - >10,000 Ci
860175001	Spectrulite Consortium, Inc.	SMK	Renewal	14-Jan-98	Storage Only
860104401	Nycomed Amersham	CGV	Renewal	03-Mar-98	Broad Scope Manufacturing & Distribution
860176801	Cook County Hospital	DMP	Renewal	14-Apr-98	Broad Scope Medical/Veterinary Use
860203001	Plexus Scientific Corporation	DMP	New Application	08-May-98	Service (such as instrument calibration, source leak testing and laboratory analysis)
860112301	Steris, Inc.	SMK	Renewal	30-Jun-98	Dry or Pool-Type Open Gamma Irradiator - >10,000 Ci
860124802	Evanston Northwestern Healthcare	SMK	Renewal	21-Jul-98	Broad Scope Medical/Veterinary Use
860134701	Adco Services, Inc.	DSP	Renewal	22-Jul-98	Low-Level Radioactive Waste Treatment Facilities
860111201	Matsushita Industrial Equipment (Miecoa)	TLH	Renewal	14-Aug-98	Self-Shielded Gamma Irradiator
860194201	Professional Laundry Management, Inc.	MEB	Amendment	04-Sep-98	Decontamination Facilities

860172101	Syncor Corporation	DMP	Renewal	09-Sep-98	Specific Manufacturing & Distribution
860187901	Northwestern University	DMP	Renewal	09-Sep-98	Broad Scope Research & Development
860109702	Michael Reese Medical Center Corporation	DMP	Renewal	27-Oct-98	Broad Scope Research & Development
860169301	University Of Chicago	CGV	Renewal	15-Dec-98	Broad Scope Research & Development
860147001	General Electric Morris Operation	CGV	Renewal	16-Dec-98	Decontamination Facilities
860120901	Primex Technologies, Inc.	TLH	Renewal	18-Dec-98	Specific Manufacturing & Distribution
860101301	Stan A. Huber Consultants Inc.	CGV	Amendment	12-Jan-99	Specific Manufacturing & Distribution
860101301	Stan A. Huber Consultants Inc.	CGV	Renewal	12-Jan-99	Specific Manufacturing & Distribution
860109701	Michael Reese Hospital And Medical Center	MEB	Renewal	18-Jan-99	Broad Scope Medical/Veterinary Use
860169401	CMI Intl. Corp.	CGV	Renewal	05-Feb-99	Specific Manufacturing & Distribution
860205201	Trace Photonics Incorporated	DMP	New Application	08-Apr-99	Specific Research & Development
860134901	Syncor Corporation	MEB	Termination	16-Apr-99	Specific Manufacturing & Distribution
860173901	Illinois Institute Of Technology	MEB	Renewal	11-May-99	Broad Scope Research & Development
860112302	STERIS, Inc.	MEB	Renewal	27-May-99	Dry or Pool-Type Open Gamma Irradiator - >10,000 Ci
860205301	Endorex Corporation	SMK	New Application	04-Jun-99	Specific Research & Development
860111901	Ordner Well Services	DMP	Termination	16-Jul-99	Wireline Service Operations (well logging)
860205001	Indev Gauging Systems	MEB	New Application	26-Aug-99	Specific Manufacturing & Distribution
860206201	Source Tech Medical	MEB	New Application	27-Sep-99	Specific Manufacturing & Distribution
860100501	Barber-Colman Company	MEB	Termination	27-Sep-99	Specific Manufacturing & Distribution
860205801	Revis Services Incorporated	CGV	New Application	28-Sep-99	Service (such as instrument calibration, source leak testing and laboratory analysis)
860111701	Mallinckrodt Medical, Inc.	DMP	Renewal	25-Oct-99	Specific Manufacturing & Distribution
860207401	Eastern Isotopes, Inc.	DMP	New Application	29-Oct-99	Specific Manufacturing & Distribution

860120401	Methodist Medical Center Of Illinois	MEB	Renewal	04-Nov-99	Specific Manufacturing & Distribution
860155701	Southern Illinois University	MEB	Renewal	06-Mar-00	Specific Research & Development
860135422	Heuft USA, Inc.	DMP	Renewal	19-Apr-00	Service (such as instrument calibration, source leak testing and laboratory analysis)
860209401	Valent Biosciences Corporation	SMK	New Application	20-Apr-00	Specific Research & Development
860207201	Mobile Pet Systems, Inc.	DMP	New Application	18-May-00	Service (such as instrument calibration, source leak testing and laboratory analysis)
860125801	Dupont Pharmaceutical Company	MEB	Termination	24-May-00	Distribution (No manufacturing or processing)
860135001	TM Analytic, Inc.	SMK	Termination	06-Jun-00	Specific Manufacturing & Distribution
860101003	Kay-Ray/Sensall, Inc.	SMK	Renewal	09-Jun-00	Specific Manufacturing & Distribution
860149201	BP Amoco Naperville Complex	SMK	Renewal	16-Jun-00	Broad Scope Research & Development
860187401	Pharmacy Services Of Peoria, LLC	CGV	Renewal	05-Jul-00	Nuclear Pharmacy, or Limited Manufacturing & Distribution
860139701	Diagnostic Health Services	TLH	Renewal	14-Jul-00	Mobile Nuclear Medicine
860103702	Northwestern Memorial Medical Center	SMK	Renewal	24-Jul-00	Broad Scope Medical/Veterinary Use
860208501	Midwest Generation, LLC	DMP	Termination	25-Aug-00	Fixed Gauges
860132401	Helene Curtis/Unilever Home & Personal Care – USA	DMP	Termination	07-Sep-00	Specific Research & Development
860162101	Columbus Medical Center	DMP	Renewal	20-Oct-00	Medical/Veterinary Use, including Teletherapy and/or High Dose Rate Remote Afterloaders
860112302	STERIS, Inc.	DMP	Renewal	30-Oct-00	Dry or Pool-Type Open Gamma Irradiator - >10,000 Ci
860194201	Professional Laundry Management, Inc.	CGV	Termination	20-Nov-00	Decontamination Facilities
860204201	Vesuvius USA	DMP	New Application	28-Nov-00	Nuclear Pharmacy, or Limited Manufacturing & Distribution

Bankruptcy						
LicNbr	Facility Name	Assgn	Action	LicAmApp	Description	
860184601	Doctors Hospital of Hyde Park		Terminated		Medical Veterinary Use	
860139701	Diagnostic Health Services		Active		Mobile Nuclear Medicine	

Emergency Plans						
LicNbr	Facility Name	Assgn	Action	LicAmApp	Description	
860206201	Source Tech Medical	MEB	New App.	27-Sep-99	Specific Manufacturing & Distribution	

For Sealed Source and Device Program:

LICNBR	FAC_NAME	Action	RedDept	LicAmApp
860100501	Barber-Colman Company	Amendment	10-Jul-97	27-Sep-99
860100501	Barber-Colman Company	Amendment	15-Aug-97	10-Feb-99
860100501	Barber-Colman Company	Termination	04-Sep-98	27-Sep-99
860101003	Kay-Ray/Sensall, Inc.	Amendment	01-May-97	16-Jun-97
860101003	Kay-Ray/Sensall, Inc.	Other	08-Sep-97	02-Jun-99
860101003	Kay-Ray/Sensall, Inc.	Amend - Dev Rev	08-Oct-97	13-Jul-99
860101003	Kay-Ray/Sensall, Inc.	Amend - Dev Rev	08-Oct-97	13-Jul-99
860101003	Kay-Ray/Sensall, Inc.	Amend - Dev Rev	08-Oct-97	13-Jul-99
860101003	Kay-Ray/Sensall, Inc.	Amendment	07-Apr-98	17-Apr-98
860101003	Kay-Ray/Sensall, Inc.	Amendment	22-Jul-98	02-Mar-99
860101003	Kay-Ray/Sensall, Inc.	Amend - Dev Rev	22-Jul-98	02-Jun-99
860101003	Kay-Ray/Sensall, Inc.	Amend - Dev Rev	22-Jul-98	02-Jun-99
860101003	Kay-Ray/Sensall, Inc.	Amend - Dev Rev	22-Jul-98	02-Jun-99
860101003	Kay-Ray/Sensall, Inc.	Amend - Dev Rev	22-Jul-98	02-Jun-99
860101003	Kay-Ray/Sensall, Inc.	Amendment	31-Aug-98	05-Oct-98
860101003	Kay-Ray/Sensall, Inc.	Amendment	30-Dec-98	02-Mar-99
860101003	Kay-Ray/Sensall, Inc.	Amendment	07-Apr-99	10-Sep-99
860101003	Kay-Ray/Sensall, Inc.	Amend - Dev Rev	19-Apr-99	20-Sep-00
860101003	Kay-Ray/Sensall, Inc.	Amend - Dev Rev	19-Apr-99	22-Sep-00
860101003	Kay-Ray/Sensall, Inc.	Amendment	21-Jul-99	03-Aug-99
860101003	Kay-Ray/Sensall, Inc.	Other	04-Aug-99	14-Jan-00
860101003	Kay-Ray/Sensall, Inc.	Amend - Dev Review	18-Aug-99	23-Aug-00
860101003	Kay-Ray/Sensall, Inc.	Amendment	29-Feb-00	09-Jun-00
860101003	Kay-Ray/Sensall, Inc.	Renewal	21-Mar-00	09-Jun-00
860101301	Stan A. Huber Consultants Inc.	Amend - Dev Rev	30-Sep-99	04-Aug-00
860101301	Stan A. Huber Consultants Inc.	Amend - Dev Rev	30-Sep-99	

860101301	Stan A. Huber Consultants Inc.	Amend - Dev Rev	30-Sep-99	04-Aug-00
860101301	Stan A. Huber Consultants Inc.	Amendment	30-Sep-99	04-Aug-00
860110901	Medi+Physics, Inc.	Amend - SS Eval	09-May-97	19-Feb-98
860110901	Medi+Physics, Inc.	Amendment	14-Aug-97	03-Sep-97
860110901	Medi+Physics, Inc.	Amend - SS Eval	20-Mar-98	11-May-98
860110901	Medi+Physics, Inc.	Amendment	12-Jun-98	24-Jan-00
860110901	Medi+Physics, Inc.	Amend - SS Eval	14-Aug-98	13-Oct-98
860110901	Medi+Physics, Inc.	Amend - SS Eval	14-Aug-98	14-Oct-98
860110901	Medi+Physics, Inc.	Amend - SS Eval	21-Jun-99	23-Jul-99
860110901	Medi+Physics, Inc.	Amend - SS Eval	21-Jun-99	23-Jul-99
860110901	Medi+Physics, Inc.	Amend - SS Eval	23-Nov-99	15-Feb-00
860110901	Medi+Physics, Inc.	Amend - SS Eval	31-Mar-00	02-Jun-00
860110901	Medi+Physics, Inc.	Amendment	02-Oct-00	18-Oct-00
860112701	PACKARD BIOSCIENCE COMPANY	Renewal	01-Oct-97	05-Oct-98
860112701	PACKARD BIOSCIENCE COMPANY	Amendment	29-Mar-99	09-Apr-99
860112701	PACKARD BIOSCIENCE COMPANY	Termination	15-May-00	29-Jun-00
860113002	Siemens Medical Systems, Inc.	Amendment	06-Jun-97	12-Jun-97
860113002	Siemens Medical Systems, Inc.	Amendment	17-Jun-97	03-Jul-97
860113002	Siemens Medical Systems, Inc.	Amendment	05-Nov-97	21-Nov-97
860113002	Siemens Medical Systems, Inc.	Device Evaluation	16-Jan-98	02-Jul-98
860113002	Siemens Medical Systems, Inc.	Amendment	18-Feb-98	09-Mar-98
860113002	Siemens Medical Systems, Inc.	Amendment	24-Sep-98	27-May-99
860113002	Siemens Medical Systems, Inc.	Amendment	02-Nov-98	14-Dec-98
860113002	Siemens Medical Systems, Inc.	Amendment	12-Nov-98	27-Jan-99
860113002	Siemens Medical Systems, Inc.	Amendment	29-Nov-99	27-Jan-00
860113002	Siemens Medical Systems, Inc.	Amendment	17-Dec-99	
860113002	Siemens Medical Systems, Inc.	Amendment	17-Dec-99	27-Jan-00
860113002	Siemens Medical Systems, Inc.	Amendment	01-May-00	25-Aug-00
860113002	Siemens Medical Systems, Inc.	Amendment	03-Jul-00	18-Jul-00
860113002	Siemens Medical Systems, Inc.	Amendment	30-Oct-00	30-Oct-00

860113002	Siemens Medical Systems, Inc.	Amend – SS Eval	06-Dec-00	12-Dec-00
860113002	Siemens Medical Systems, Inc.	Amendment	07-Dec-00	21-Dec-00
860128301	E.S.C. Resources, Inc.	Amend – Dev Rev	12-May-97	30-Jun-97
860128301	E.S.C. Resources, Inc.	Amendment	12-May-97	30-Jun-97
860128301	E.S.C. Resources, Inc.	Amendment	16-Jul-97	25-Sep-97
860128301	E.S.C. Resources, Inc.	Amend – Dev Rev	16-Jul-97	25-Sep-97
860128301	E.S.C. Resources, Inc.	Amendment	24-Nov-97	08-Jan-98
860128301	E.S.C. Resources, Inc.	Amendment	12-Jan-98	30-Jan-98
860128301	E.S.C. Resources, Inc.	Amendment	10-Feb-98	11-May-98
860128301	E.S.C. Resources, Inc.	Amendment	09-Nov-99	23-Nov-99
860133901	Lixi, Incorporated	Renewal	30-Dec-98	05-Jan-01
860133901	Lixi, Incorporated	Amend – Dev Review	13-Oct-99	22-Aug-00
860133901	Lixi, Incorporated	Amendment	06-Jun-00	22-Aug-00
860133901	Lixi, Incorporated	Amendment	19-Jun-00	22-Aug-00
860135422	Heuft USA, Inc.	Renewal	28-Dec-98	19-Apr-00
860135422	Heuft USA, Inc.	Amendment	15-Mar-99	18-Jun-99
860135601	Alnor Instrument Company	Amendment	05-Aug-98	09-Oct-98
860135601	Alnor Instrument Company	Renewal	16-Dec-98	23-Jun-00
860135601	Alnor Instrument Company	Amendment	11-Jan-99	01-Feb-99
860135601	Alnor Instrument Company	Amendment	12-Nov-99	23-Jun-00
860169401	CMI Intl. Corp.	Amendment	27-Jul-98	22-Sep-98
860169401	CMI Intl. Corp.	Amendment	25-Jun-99	
860180701	Minnesota, Mining And Manufacturing	Amendment	21-Aug-97	25-Nov-97
860180701	Minnesota, Mining And Manufacturing	Amendment	21-Oct-97	25-Nov-97
860180701	Minnesota, Mining And Manufacturing	Amend – Dev Rev	16-Mar-98	02-Mar-99
860180701	Minnesota, Mining And Manufacturing	Amendment	20-Apr-98	29-Apr-99
860180701	Minnesota, Mining And Manufacturing	Amendment	05-Jun-98	02-Mar-99
860180701	Minnesota, Mining And Manufacturing	Amendment	09-Jun-98	21-Jun-98
860180701	Minnesota, Mining And Manufacturing	Amendment	27-Jul-98	18-Nov-98

860180701	Minnesota, Mining And Manufacturing	Amendment	10-Aug-98	24-Aug-98
860180701	Minnesota, Mining And Manufacturing	Amendment	13-Oct-98	18-Nov-98
860180701	Minnesota, Mining And Manufacturing	Amendment	12-Nov-98	18-Nov-98
860180701	Minnesota, Mining And Manufacturing	Amendment	24-Feb-99	08-Apr-99
860180701	Minnesota, Mining And Manufacturing	Amendment	20-Sep-99	12-Jan-00
860180701	Minnesota, Mining And Manufacturing	Amendment	29-Oct-99	12-Jan-00
860180701	Minnesota, Mining And Manufacturing	Amendment	12-Jun-00	21-Aug-00
860187201	Gamma Instruments, Inc.	Amendment	25-Jun-97	21-Jul-97
860187201	Gamma Instruments, Inc.	Amendment	21-Nov-97	20-Apr-98
860187201	Gamma Instruments, Inc.	Amend - Dev Rev	21-Nov-97	20-Apr-98
860187201	Gamma Instruments, Inc.	Amendment	29-Mar-99	27-Oct-99
860187201	Gamma Instruments, Inc.	Amendment	01-Jul-99	07-Jul-99
860193001	Bebig Trade, Inc.	Amendment	27-Jan-98	19-Mar-98
860193001	Bebig Trade, Inc.	Sealed Src Eval	20-Jan-99	25-May-99
860193001	Bebig Trade, Inc.	Amendment	20-Jan-99	12-Apr-99
860205001	Indev Gauging Systems	New Application	04-Sep-98	26-Aug-99
860205001	Indev Gauging Systems	Device Evaluation	20-Jul-99	22-Sep-99
860205001	Indev Gauging Systems	Amendment	26-Aug-99	22-Sep-99
860205001	Indev Gauging Systems	Amendment	24-Oct-99	
860205001	Indev Gauging Systems	Amendment	10-Dec-99	31-Jan-00
860205001	Indev Gauging Systems	Amendment	13-Apr-00	20-Apr-00
860205801	REVISS Services, Inc.	New Application	20-Jan-99	28-Sep-99
860205801	REVISS Services, Inc.	Device Evaluation	20-Jan-99	28-Sep-99
860205801	REVISS Services, Inc.	Device Evaluation	20-Jan-99	28-Sep-99
860205801	REVISS Services, Inc.	Amendment	03-Dec-99	04-Dec-00
860205801	REVISS Services, Inc.	Amendment	03-May-00	03-Jul-00
860205801	REVISS Services, Inc.	Amendment	20-Nov-00	04-Dec-00
860205801	REVISS Services, Inc.	Amendment	27-Nov-00	04-Dec-00
860206201	Source Tech Medical	Amend - SS Eval	05-Apr-99	18-May-00
860206201	Source Tech Medical	New Application	05-Apr-99	27-Sep-99

860206201	Source Tech Medical	Amendment	05-Apr-99	22-May-00
860206201	Source Tech Medical	Amendment	19-Jan-00	17-Mar-00
860206201	Source Tech Medical	Amendment	26-Jan-00	18-Feb-00
860206201	Source Tech Medical	Amendment	30-May-00	09-Jun-00
860206201	Source Tech Medical	Amend – SS Eval	15-Jun-00	08-Jan-01
860206201	Source Tech Medical	Amend – SS Eval	14-Nov-00	08-Jan-01

For the Low-Level Radioactive Waste Disposal Program:

None

For the Uranium Recovery Program:

For the Kerr-McGee decommissioning project in West Chicago, Illinois amendments were issued:

- **Authorizing use of the Field Verification System (FVS)**
- **Establishing cleanup standards for residual uranium in dry soil**
- **Authorizing operation of the Water Treatment Plant**
- **Authorizing Phase IV decommissioning activities including deep excavations (below water table), excavation dewatering and backfilling**

Prepared Environmental Analysis Report IV – for Decommissioning of Kerr-McGee project dated July 1998; and Safety Evaluation Report for the Decommissioning Activities of Kerr-McGee project dated April 1998. Public comments were solicited on the EA from January 22, 1998 through March 9, 1998.

Conducted Quality Assurance Audits/Surveillance on Kerr-McGee project:

**June 17-18, 1997
March 25-26, 1998
March 23-25, 1999
April 3-7, 2000**

Prepared Regulatory Requirement Assessment for the Decommissioning of the Kerr-McGee West Chicago Rare Earths Facility – June 1999

Conducted completeness and technical reviews of the Groundwater Corrective Action Plan and Alternate Concentration Limits Demonstration submittals.

17. Discuss any variances in licensing policies and procedures or exemptions from the regulations granted during the review period.

Exemptions for Materials Licensees

<u>Date</u>	<u>Type</u>	<u>License #</u>
1/9/01	Exemption from 335.2080 for surveys at lymph node biopsies	IL-01766-01
3/21/00	Exemption for disposal of animal tissue if limits of 340.1050 not exceeded	IL-01739-01
1/9/00	Exemption from 335.5030(b)(3) for release of patients before 48 hours if hospitalized for reasons unrelated to the treatment	IL-01037-02
11/22/99	Exemption for disposal of animal tissue if limits of 340.1050 not exceeded	IL-01563-01
4/6/99	Exemption from the R&R fee for 2 general licensees	9222746 9223305
6/8/99	Exemption from 335.2100 for release of Non-Hodgkin's Lymphoma patients	All that meet guidance
3/30/98	Exemption from 335.2080 for surveys at lymph node biopsies	IL-01248-02
3/23/98	Exemption from financial assurance	IL-01478-02
2/24/98	Exemption from financial assurance	IL-01478-01

For the Low-Level Radioactive Waste Disposal Program:

None

For the Uranium Recovery Program:

None

18. What, if any, changes were made in your written licensing procedures (new procedures, updates, policy memoranda, etc.) during the reporting period?

5/13/98	Fee processing moved to OAS
3/19/99	Financial assurance responsibilities transferred to LLRW/SD
7/1/99	Reemphasis on proper use of memoranda
8/9/99	Standard DRM licensing letters and license conditions
8/10/99	Standard conditions update for financial assurance
1/12/00	Expedited renewal process implemented
5/4/00 licenses	Licenses no longer issued –22 or –33 suffixes for "expired no-app"
10/30/00	Standard conditions update for industrial radiography source retrieval, training in restricted areas and financial assurance
11/30/00	New financial assurance policy
1/17/01	Standard conditions update for dosimetry, emergency plans and radiation monitoring in the surgical suites
1/25/01	Policy regarding radiological criteria for radioactive material license termination

For the Low-Level Radioactive Waste Disposal Program:

None

For the Uranium Recovery Program:

None

For the Financial Assurance Program:

In conjunction with new rules on Financial Assurance Requirements, Part 326, effective June 1, 2000, the "Guidance Document on Financial Assurance" was updated effective June 2000, Revision 1. In addition, the ORS/DRM Administrative

Policy Memorandum on Financial Assurance was revised effective November 30, 2000 to outline extensive procedures for implementing Part 326.

19. For NRC Regions, identify by licensee name, license number and type, any renewal applications that have been pending for one year or more.

N/A

V. Responses to Incidents and Allegations

20. Please provide a list of the reportable incidents (i.e., medical misadministration, overexposures, lost and abandoned sources, incidents requiring 24 hour or less notification, etc. See Handbook on Nuclear Material Event Reporting in Agreement States for additional guidance.) that occurred in the Region/State during the review period. For Agreement States, information included in previous submittals to NRC need not be repeated (i.e., those submitted under OMB clearance number 3150-0178, Nuclear Material Events Database). The list should be in the following format:

For the Radioactive Materials Program:

All significant incidents have been reported to the NRC and the information is available on the NRC's Nuclear Materials Events Database (NMED).

A unique incident that was reported on NMED involved a November 3, 1999 IDNS response to a damaged H-3 exit sign in Flora, Illinois. A five-month decontamination project resulted from this incident. Details for this, as well as all others, will be available for review during the IMPEP audit.

21. During this review period, did any incidents occur that involved equipment or source failure or approved operating procedures that were deficient? If so, how and when were other State/NRC licensees who might be affected notified? For States, was timely notification made to NRC? For Regions, was an appropriate and timely PN generated?

The most significant problem encountered during this review period involved Kay-Ray/Sensall, Inc.'s multiple failures of the 7062B, BP device. Illinois had Kay-Ray/Sensall, Inc. notify NRC, Agreement States and customers of vibrational concerns. NRC's Generic Assessment Panel also reviewed these incidents. Illinois solicited design changes from Kay-Ray/Sensall, Inc. to improve the design against vibrational conditions. Kay-Ray/Sensall, Inc. later moved operations to Texas under TN Technologies. The Texas Agreement State Program was notified of the incidents and Kay-Ray/Sensall's commitments for design changes and vibration testing.

This problem as well as all others noted during this period were reported to the NMED system and can be obtained from NMED. All details are available in our files.

22. For incidents involving failure of equipment or sources, was information on the incident provided to the agency responsible for evaluation of the device for an assessment of possible generic design deficiency? Please provide details for each case.

We are unaware of any such incidents.

23. In the period covered by this review, were there any cases involving possible wrongdoing that were reviewed or are presently undergoing review? If so, please describe the circumstances for each case.

We are currently assessing one case of possible wrongdoing, involving alleged willful misstatements by a licensee during the course of a Department inspection. The licensee (McNDT Leasing, Inc., IL-01875-01) allegedly made these statements in order to avoid the finding of a non-certified radiographer violation.

24. Identify any changes to your procedures for handling allegations that occurred during the period of this review.

N/A

- a. For Agreement States, please identify any allegations referred to your program by the NRC that have not been closed.

All four referenced during this review period have been closed.

VI. General

25. Please prepare a summary of the status of the State's or Region's actions taken in response to the comments and recommendations following the last review.

There was only one recommendation included in the final report. That recommendation concerned a rule change that has since been completed. The complete list of suggestions and the one recommendation and brief responses follow:

1. The team suggests that the State examine their procedures for preparing inspection reports and correspondence, and make modifications needed to assure timely issuance of inspection findings.

We continue to emphasize and work diligently towards communicating inspection findings to licensees within 30 days of the inspection. The inspectors' annual evaluations contain a performance standard regarding this item, and they are counseled formally each year, and more frequent as necessary, to try to achieve the standard.

2. Now that the inspection backlog has been overcome, the team suggests that the State should reconsider the IMC 1220 guidance for conducting reciprocity inspections, and increase the reciprocity inspections to meet the guidance (Section 3.1).

We have emphasized reciprocity inspections to a greater degree than in the past. We perform at least the alternate goal of 10 to 20 percent of priority 1 licensees and reactive inspections for other priorities addressed during the June 1998 interim visit. Reciprocity notifications are communicated to DRM staff electronically as we receive them and every reasonable effort is made to inspect these operations at a frequency that the Department is confident ensures health and safety.

3. The review team suggests that license reviewers check SS&D registry sheets prior to authorizing license modifications which result in a change in the handling of an SS&D (Section 3.3).

The SS&D registry sheets continue to be a key element in the review of license modifications.

4. The review team suggests that the State evaluate whether the practice of deferring inspections due to licensee scheduling conflicts is being abused (Section 3.4).

“Unannounced” inspections consistent with NRC’s understanding are now standard with our program. Inspections are only deferred to licensee scheduling conflicts for unusual circumstances.

5. The review team suggests that the procedures for notifying NRC of incidents be revised to reflect the current guidance to Agreement States to notify the NRC Headquarters Operations Center of events requiring immediate or 24-hour reporting by the licensee (Section 3.5).

Our practice of notifying NRC of incidents is consistent with SA-300 – Reporting Material Events: We notify Jim Lynch as well as the NRC Operations Center consistent with this guidance.

6. The review team suggests that the State reconsider the benefits of participating in the NMED system (Section 3.5).

Since 1998, we have been using the NRC’s NMED program. It has not been easy as it is a Microsoft Access Version 2.0 document that is not compatible with our network system and many other states' systems. However, we are committed to using the NMED and anxiously await the new revision which should be available shortly according to Sam Pettijohn, NRC. As further evidence of our commitment to NMED, the DRM chief, is also the Chair of the CRCPD E-34 Committee and has promoted the use of the NMED program throughout the United States and has developed a training program with Mr. Pettijohn concerning the importance and use of NMED. The first training program will be at NRC Region II headquarters in Atlanta in late March 2001.

7. The review team recommends that IDNS expedite promulgation of Part 330 at the first opportunity (Section 4.1).

32 Ill. Adm. Code 330 was amended and a new Part 326 entitled, "Financial Assurance Requirements," has been promulgated. This was a major expansion in the requirements for financial assurance for Illinois specific and even some general licensees.

8. The review team suggests that the State evaluate the review information supporting the registry sheet issued during this period to ensure there is no weakness in the review process (Section 4.2.1).

The Materials Licensing Section continues to carefully document their reviews of sealed source and device evaluations. Our program is fortunate in that we have had no turnover in staff and our staff are very experienced and knowledgeable. In fact, we are frequently asked by other states for assistance in technical matters relating to SS&D evaluations. In fact, at the request of the State of Ohio, we are currently training Ohio staff on SS&D evaluations.

9. The review team suggests that the documentation issues identified in Appendix G be addressed as appropriate (Section 4.2.1).

These issues were addressed in subsequent communication, written and oral, after the 1997 IMPEP review. We are confident that our documentation is appropriate and adequate to protect public health and safety.

10. The review team suggests in future evaluations that the State ensure all major issues are documented by either correspondence from the manufacturer or a note to the file by the reviewer (Section 4.2.1).

Again, we are confident that all major issues are documented appropriately in our sealed source and device evaluations.

26. Provide a brief description of your program's strengths and weaknesses. These strengths and weaknesses should be supported by examples of successes, problems or difficulties which occurred during this review period.

This program's greatest strength continues to be the knowledge, experience and expertise of the staff, coupled with a very low turnover rate. Department staff serve on many national working groups and committees including the Organization of Agreement States and the Conference of Radiation Control Program Directors, Inc. Department staff serve as Chairs of important committees and make numerous presentations at national meetings.

Licensing actions and sealed source and device reviews that would be characterized as difficult or technically challenging are handled routinely by licensing staff. Their expertise is recognized by other states and the NRC and we

often receive inquiries for technical assistance in this regard. The State of Ohio requested assistance in providing a training program for their staff regarding sealed source and device evaluations. We are currently working with Ohio on this program and soon it will culminate with our Materials Licensing Section Head providing two days of instruction, a site visit to a manufacturer and a final examination for the Ohio students.

In addition to typical regulatory activities, our staff have also performed practical health physics projects such as decontaminating a tritium-contaminated residential property and removing radioactive sources from devices and packaging them for shipment for disposal. Our inspection staff has repeatedly demonstrated its extremely proficient response to any radiation-related problem encountered at any time of the day.

We also take great pride in our continued effective regulatory oversight of one of the largest privately funded site decommissionings ever conducted. This is a major project on any regulatory program's standards and we have established a very effective and efficient onsite resident inspector program and a verification program through the coordination and cooperation of our Office of Environmental Safety.

In our efforts to be as efficient as possible without compromising health and safety, we recently implemented an "expedited renewal" option for our specific radioactive material licensees. This is working well thus far and has reduced unnecessary paperwork and increased efficiency of not only our staff but that of the licensees.

Finally, our regulations and user-friendly guidance documents developed by our staff have greatly assisted licensees, and are often used as templates by foreign countries, the CRCPD and other Agreement states. All guidance documents, forms and other information to assist licensees are available on the Department's website for easy access and downloading by licensees and applicants.

There are no significant program weaknesses.

B. NON-COMMON PERFORMANCE INDICATORS

I. Legislation and Program Elements Required for Compatibility

27. Please list all currently effective legislation that affects the radiation control program (RCP).

CENTRAL MIDWEST RADIOACTIVE WASTE COMPACT ACT
[45 ILCS 140/0.01 – 140/1 (1998 State Bar Edition)]

DEPARTMENT OF NUCLEAR SAFETY
[20 ILCS 2005/2005-1 – 2005/2005-85 (1988 State Bar Edition, 1999 Supp.)]

FREEDOM OF INFORMATION ACT
[5 ILCS 140/1 – 140/11 (1998 State Bar Edition, 1999 Supp.)]

ILLINOIS ADMINISTRATIVE PROCEDURE ACT
[5 ILCS 100/1-1 – 15-10 (1998 State Bar Edition, 1999 Supp.)]

RADIATION PROTECTION ACT OF 1990
[420 ILCS 40/1 – 40/45 (1998 State Bar Edition, 1999 Supp.)]

RADIOACTIVE WASTE STORAGE ACT
[420 ILCS 35/0.01 – 35/6 (1998 State Bar Edition)]

URANIUM AND THORIUM MILL TAILINGS CONTROL ACT
[420 ILCS 42/1 – 42/99 (State Bar Edition)]

28. Are your regulations subject to a "Sunset" or equivalent law? If so, explain and include the next expiration date for your regulations.

Public Act 91-752, which was effective June 2, 2000, extended the sunset date for the Radiation Protection Act of 1990 until January 1, 2011.

29. Please complete the enclosed table based on NRC chronology of amendments. Identify those that have not been adopted by the State, explain why they were not adopted, and discuss any actions being taken to adopt them. Identify the regulations that the State has adopted through legally binding requirements other than regulations.

See attached Regulatory Assessment Tracking System (RATS) Form, which reflects comments submitted to Mr. Fred Combs, NRC, by Kathy Allen on September 26, 2000.

30. If you have not adopted all amendments within three years from the date of NRC rule promulgation, briefly describe your State's procedures for amending regulations in order to maintain compatibility with the NRC, showing the normal length of time anticipated to complete each step.

If the NRC adopts a rule that affects only a small number of licensees, the Department may choose to "adopt" those regulations by imposing similar requirements on licensees through the licensing process. Sometimes this is done because the Department is working on more pressing projects or rules, and sometimes this is done as an interim step until a major rulemaking is finalized that may include the NRC changes in addition to other changes.

Once a rulemaking is contemplated, it is listed on the semiannual regulatory agenda. Department staff write the rule, taking into account NRC's rule, comments previously submitted to the NRC, any CRCPD language available, and comments on that section of the rule previously identified as needing to be fixed. After drafting, rules are typically provided to staff for internal review and comment.

Writing a rule can take anywhere from a couple of weeks to several months, depending upon the number of changes to be made and the number of comments received.

A rule must be published as a proposed rule in the Illinois Register with a 45-day minimum comment period, and may include a public hearing. After the comment period, the Department must respond to any comments and provide the comments and responses to the Joint Committee on Administrative Rules (JCAR), a bipartisan committee consisting of legislators from the State House of Representatives and the Senate. JCAR may also ask the Department to modify language it deems inappropriate or ambiguous. When the Department has prepared the rule for second notice, it must be either:

- A) Re-published for comment if there have been substantial changes to the rule, or**
- B) Scheduled for a vote at the next available monthly JCAR meeting.**

Once JCAR reviews a rule, it will be published in the Illinois Register with an effective date. Rules can usually be published as final within two weeks of approval by JCAR.

II. Sealed Source and Device Program

- 31. Prepare a table listing new and revised SS&D registrations of sealed sources and devices issued during the review period.**

See following table.

LICNR	FAC_NAME	Action	LicAmApp	Assign	New Description	Notes
860128301	E.S.C. Resources, Inc.	DEVICE EVALUATION	01-Apr-97	DMP	Specific Manufacturing & Distribution	IL-234-D-102-G
860104401	Nycomed Amersham	SEALED SRC EVAL	03-Apr-97	SMK	Broad Scope Manufacturing & Distribution	IL-136-S-349-S
860104401	Nycomed Amersham	AMEND - SS EVAL	06-Jun-97	CGV	Broad Scope Manufacturing & Distribution	IL-136-D-333-B
860104401	Nycomed Amersham	AMEND - SS EVAL	10-Jun-97	SMK	Broad Scope Manufacturing & Distribution	NR-0136-S-195-S
860128301	E.S.C. Resources, Inc.	AMEND - DEV REV	30-Jun-97	DMP	Specific Manufacturing & Distribution	IL-234-D-101-G
860187201	Gamma Instruments, Inc.	AMEND - DEV REV	28-Aug-97	DMP	Specific Manufacturing & Distribution	IL-353-D-101-G
860110901	Medi+Physics, Inc.	AMEND - SS EVAL	09-Sep-97		Broad Scope Manufacturing & Distribution	IL-136-S-338-S. ABANDON ACTION
860104401	Nycomed Amersham	AMEND - DEV REV	10-Sep-97	MEB	Broad Scope Manufacturing & Distribution	IL-136-D-340-S. MODEL IPI 401 NUCLEONICS. ACTION ABANDONED.
860104401	Nycomed Amersham	AMEND - SS EVAL	16-Sep-97	DMP	Broad Scope Manufacturing & Distribution	IL-136-S-348-S
860104401	Nycomed Amersham	AMEND - SS EVAL	16-Sep-97	DMP	Broad Scope Manufacturing & Distribution	IL-136-S-215-S
860113002	Siemens Medical Systems, Inc.	DEVICE EVALUATION	17-Sep-97	DMP	Broad Scope Manufacturing & Distribution	IL-605-D-104-S
860104401	Nycomed Amersham	AMEND - SS EVAL	22-Sep-97	CGV	Broad Scope Manufacturing & Distribution	IL-136-S-204-S MODEL CDC.700.
860128301	E.S.C. Resources, Inc.	AMEND - DEV REV	25-Sep-97	DMP	Specific Manufacturing & Distribution	IL-234-D-101-G
860169401	GMI Intl. Corp.	DEVICE EVALUATION	22-Oct-97	CGV	Specific Manufacturing & Distribution	IL-235-D-102-G
860104401	Nycomed Amersham	AMEND - SS EVAL	22-Oct-97	DMP	Broad Scope Manufacturing & Distribution	IL-136-S-197-S MODEL CPC.PEN
860104401	Nycomed Amersham	AMEND - SS EVAL	24-Oct-97	DMP	Broad Scope Manufacturing & Distribution	IL-136-S-232-S MODEL CDC.711M.
860128301	E.S.C. Resources, Inc.	DEVICE EVALUATION	05-Dec-97	MEB	Specific Manufacturing & Distribution	IL-234-D-103-G
860120401	Methodist Medical Center of Illinois	SEALED SRC EVAL	30-Dec-97	MEB	Specific Manufacturing & Distribution	Adtl info received 12/26/97. Action withdrawn.
860104401	Nycomed Amersham	AMEND - SS EVAL		DMP	Broad Scope Manufacturing & Distribution	IL-136-S-211-S
860104401	Nycomed Amersham	SEALED SRC EVAL	17-Feb-98	DMP	Broad Scope Manufacturing & Distribution	IL-136-S-350-S.
860110901	Medi+Physics, Inc.	AMEND - SS EVAL	19-Feb-98	CGV	Broad Scope Manufacturing & Distribution	IL-136-S-338-S
860193001	Bebig Trade, Inc.	SEALED SRC EVAL	20-Mar-98	MEB	Distribution (No manufacturing or processing)	IL-103-S-108-S. MODEL # AMI.N03.
860193001	Bebig Trade, Inc.	AMEND - SS EVAL	30-Mar-98	SMK	Distribution (No manufacturing or processing)	IL-103-S-104-S Cs7.P05-1 and Co0.P05-2

LICNR	FAC_NAME	Action	LicAmApp	Assgn	New Description	Notes
860187201	Gamma Instruments, Inc.	AMEND - DEV REV	20-Apr-98	DMP	Specific Manufacturing & Distribution	IL-353-D-101-G- Action did not require amendment to SSD.
860110901	Medi+Physics, Inc.	AMEND - SS EVAL	11-May-98	MEB	Broad Scope Manufacturing & Distribution	
860104401	Nycomed Amersham	AMEND - SS EVAL	29-Jun-98	DMP	Broad Scope Manufacturing & Distribution	IL-136-S-240-S.
860113002	Siemens Medical Systems, Inc.	DEVICE EVALUATION	02-Jul-98	DMP	Broad Scope Manufacturing & Distribution	IL-0605-D-105-S
860104401	Nycomed Amersham	AMEND - SS EVAL	03-Aug-98	SMK	Broad Scope Manufacturing & Distribution	IL-136-S-349-S.
860104401	Nycomed Amersham	SSD INACTIVE	10-Aug-98	CGV	Broad Scope Manufacturing & Distribution	IL-136-S-912-S. TRANSFER TO MASS. 8/10/98. Bought by Revis.
860104401	Nycomed Amersham	SSD INACTIVE	10-Aug-98	CGV	Broad Scope Manufacturing & Distribution	IL-136-S-911-S. TRANSFER TO MASS. IL-136-S-215-S assoc. reg.
860104401	Nycomed Amersham	AMEND - SS EVAL	14-Aug-98	SMK	Broad Scope Manufacturing & Distribution	IL-136-S-191-S CDC.Cyn
860104401	Nycomed Amersham	AMEND - DEV REV	18-Aug-98	CGV	Broad Scope Manufacturing & Distribution	IL-0136-D-333-B.
860110901	Medi+Physics, Inc.	AMEND - SS EVAL	13-Oct-98	DMP	Broad Scope Manufacturing & Distribution	IL-136-S-338-S.
860110901	Medi+Physics, Inc.	AMEND - SS EVAL	14-Oct-98	DMP	Broad Scope Manufacturing & Distribution	IL136-S-337-S.
860104401	Nycomed Amersham	AMEND - SS EVAL	08-Feb-99	CGV	Broad Scope Manufacturing & Distribution	IL-136-S-330-S CKC.LSA
860180701	Minnesota, Mining And Manufacturing	AMEND - DEV REV	02-Mar-99	CGV	Specific Manufacturing & Distribution	IL-718-D-102-S
860104401	Nycomed Amersham	DEVICE EVALUATION	13-May-99	DMP	Broad Scope Manufacturing & Distribution	IL-136-D-352-S.
860104401	Nycomed Amersham	AMEND - SS EVAL	13-May-99	DMP	Broad Scope Manufacturing & Distribution	IL-136-S-353-S
860113002	Siemens Medical Systems, Inc.	SSD INACTIVE	24-May-99	DMP	Broad Scope Manufacturing & Distribution	
860113002	Siemens Medical Systems, Inc.	SSD INACTIVE	24-May-99	DMP	Broad Scope Manufacturing & Distribution	
860113002	Siemens Medical Systems, Inc.	SSD INACTIVE	24-May-99	DMP	Broad Scope Manufacturing & Distribution	
860112701	Packard Bioscience Company	SSD INACTIVE	24-May-99	DMP	Service (such as instrument calibration, source leak testing and laboratory analysis)	IL-495-D-101-S
860112701	Packard Bioscience Company	SSD INACTIVE	24-May-99	DMP	Service (such as instrument calibration, source leak testing and laboratory analysis)	495-D-102-S
860193001	Bebig Trade, Inc.	SEALED SRC EVAL	25-May-99	DMP	Distribution (No manufacturing or processing)	IL-103-S-110-S
860110901	Medi+Physics, Inc.	AMEND - SS EVAL	23-Jul-99	DMP	Broad Scope Manufacturing & Distribution	IL-136-S-338-S.

LICNER	FAC_NAME	Action	LicAmApp	Assign	New Description	Notes
860110901	Medi+Physics, Inc.	AMEND - SS, EVAL	23-Jul-99	DMP	Distribution Broad Scope Manufacturing & Distribution	IL-136-S-337-S.
860104401	Nycomed Amersham	AMEND - SS EVAL	03-Sep-99	CGV	Broad Scope Manufacturing & Distribution	IL-136-S-246-S.
860205001	Indev Gauging Systems	DEVICE EVALUATION	22-Sep-99	MEB	Specific Manufacturing & Distribution	IL-1079-D-101-G.
860100501	Barber-Colman Company	AMEND - DEV REV	24-Sep-99	MEB	Specific Manufacturing & Distribution	IL-1023-D-103-G, IL-8111-D-803-G
860100501	Barber-Colman Company	SSD INACTIVATION	24-Sep-99	MEB	Specific Manufacturing & Distribution	IL-1023-D-101-G, IL-8111-D-801-G
860100501	Barber-Colman Company	SSD INACTIVATION	24-Sep-99	MEB	Specific Manufacturing & Distribution	IL-1023-D-103-G, IL-8111-D-803-G.
860100501	Barber-Colman Company	AMEND - DEV REV	27-Sep-99	MEB	Specific Manufacturing & Distribution	IL-1023-D-102-G
860100501	Barber-Colman Company	AMEND - DEV REV	27-Sep-99	MEB	Specific Manufacturing & Distribution	IL-1023-D-101-G
860100501	Barber-Colman Company	SSD INACTIVATION	28-Sep-99	MEB	Specific Manufacturing & Distribution	IL-1023-D-102-G, IL-8111-D-802-G
860205801	REVISS Services, Inc.	Device Evaluation	28-Sep-99	CGV	Service (such as instrument calibration, source leak testing and laboratory analysis)	IL-1082-S-102-S. refund of \$59.00 ltr mid 01/27/2000 for 101 & 102
860205801	REVISS Services, Inc.	Device Evaluation		CGV	Service (such as instrument calibration, source leak testing and laboratory analysis)	IL-1082-S-101-S
860104401	Nycomed Amersham	AMEND - SS EVAL	08-Oct-99	SMK	Broad Scope Manufacturing & Distribution	IL-136-S-174-S MODEL AMM1001/AMM1001H.
860104401	Nycomed Amersham	AMEND - SS EVAL	17-Dec-99	MEB	Broad Scope Manufacturing & Distribution	IL-136-S-351-S
860110901	Medi+Physics, Inc.	Amend - SS Eval	15-Feb-00	DMP	Broad Scope Manufacturing & Distribution	refund ltr for \$170.00 mid 07/14/2000.
860101003	Kay-Ray/Sensall, Inc.	SSD INACTIVATION	17-Mar-00	SMK	Specific Manufacturing & Distribution	NR-412-D-120-B
860101003	Kay-Ray/Sensall, Inc.	AMEND - DEV REV	08-May-00	SMK	Specific Manufacturing & Distribution	IL-0412-D-122-B
860206201	Source Tech Medical	AMEND - SS EVAL	18-May-00	DMP	Specific Manufacturing & Distribution	1074-S-101-S.
860110901	Medi+Physics, Inc.	Amend - SS Eval	02-Jun-00	DMP	Broad Scope Manufacturing & Distribution	IL-136-S-338-S
860101301	Stan A. Huber Consultants Inc.	AMEND - DEV REV	04-Aug-00	MEB	Specific Manufacturing & Distribution	IL-1083-D-101-G
860101301	Stan A. Huber Consultants Inc.	AMEND - DEV REV	04-Aug-00	MEB	Specific Manufacturing & Distribution	IL-1083-D-102-G
860101301	Stan A. Huber Consultants Inc.	AMEND - DEV REV	04-Aug-00	MEB	Specific Manufacturing & Distribution	IL-1083-D-103-G.
860133901	Lixi, Incorporated	Amend - Dev Review	22-Aug-00	CGV	Specific Manufacturing & Distribution	IL-422-D-102-S and IL-422-D-101-S
860101003	Kay-Ray/Sensall, Inc.	Amend - Dev Review	23-Aug-00	CGV	Specific Manufacturing & Distribution	IL-412-D-129-B, 7062
860101003	Kay-Ray/Sensall, Inc.	AMEND - DEV REV	22-Sep-00	CGV	Specific Manufacturing & Distribution	IL-412-D-122-B, inactivation requested. This amend withdrawn.
860101003	Kay-Ray/Sensall, Inc.	SSD Inactivation	02-Oct-00	SMK	Specific Manufacturing & Distribution	NR-412-D-133-B, IL-8118-D-833-B
860101003	Kay-Ray/Sensall, Inc.	SSD INACTIVATION	13-Oct-00	SMK	Specific Manufacturing & Distribution	NR412-D-107-U, 8118-D-807-S

LICNR	FAC_NAME	Action	LicApp	Assgn	New Description	Notes
860113002	Siemens Medical Systems, Inc.	Amend - SS Eval	12-Dec-00	DMP	Broad Scope Manufacturing & Distribution	IL-606-D-105-S
860101003	Kay-Ray/Sensall, Inc.	SSD INACTIVATION	15-Dec-00	SMK	Specific Manufacturing & Distribution	NR-412-D-119-U, IL-8118-D-819-B
860101003	Kay-Ray/Sensall, Inc.	SSD INACTIVATION	15-Dec-00	SMK	Specific Manufacturing & Distribution	NR-412-D-113-U, IL-8118-D-813-S
860101003	Kay-Ray/Sensall, Inc.	SSD Inactivation	15-Dec-00	SMK	Specific Manufacturing & Distribution	NR-412-D-122-B, IL-8118-D-822-B
860101003	Kay-Ray/Sensall, Inc.	SSD INACTIVATION	04-Jan-01	SMK	Specific Manufacturing & Distribution	NR-412-D-124-B
860101003	Kay-Ray/Sensall, Inc.	SSD INACTIVATION	04-Jan-01	SMK	Specific Manufacturing & Distribution	NR-412-D-132-S, IL-8118-D-832-S
860206201	Source Tech Medical	Amend - SS Eval	08-Jan-01	DMP	Specific Manufacturing & Distribution	IL-1074-S-101-S
860206201	Source Tech Medical	Amend - SS Eval	08-Jan-01	DMP	Specific Manufacturing & Distribution	IL-1074-S-101-S

32. What guides, standards and procedures are used to evaluate registry applications?

IDNS S&D Evaluation Manuals

IDNS Instructional Set, Instructions for Preparation and Review of Quality Assurance Manuals for Licenses Authorizing Manufacture and Distribution of SS&D's

NUREG 1556, Volume 3

NRC Guide 6.9 – Quality Assurance

NRC SS&D Workshop Manual, Sept. 1995

NUREG/CR-6074, Sealed Source and Device Design Safety Testing

NRC P&G 84-22, What SS&D Designs Require an Evaluation

NRC SS&D Newsletters

Mark's Standard Handbook for Mechanical Engineers

ANSI N43.9-1991 – Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography

ISO 2919-1980(E) – Sealed Radiation Sources, Classification

ANSI N542-1977 – Sealed Radiation Sources, Classification – (Revision of ANSI N5.10-1968

ANSI N449.1-1978 – Procedures for Periodic Inspection of Cobalt-60 and Cesium-137 Teletherapy Equipment

ANSI N43.2-1977 – Radiation Safety for X-Ray Diffraction and Fluorescence Analysis Equipment

NCRP Report No. 49 – Structural Shielding Design and Evaluation for Medical Use of X-Rays and Gamma Rays of Energies up to 10 MeV

ANSI N44.2-1973 – For Leak-Testing Radioactive Brachytherapy Sources

ANSI N44.1-1973 – Integrity and Test Specifications for Selected Brachytherapy Sources

ANSI N43-8-1979 – Classification of Industrial Ionizing Radiation Gauging Devices

ANSI N433.1-1977 – Safe Design and Use of Self-Contained Dry Source Storage Gamma Irradiators (Category I)

ANSI N43.10-1984 – Safe Design and Use of Panoramic, Wet Source Storage Gamma Irradiators (Category IV)

ANSI N540-1975 – Classification of Radioactive Self-Luminous Light Sources

ANSI N43.9-1991 – For Gamma Radiography – Specifications for Design and Testing of Apparatus

33. Please include information on the following questions in Section A, as they apply to the Sealed Source and Device Program:

Technical Staffing and Training - A.III.11-15

Technical Quality of Licensing Actions - A.IV.16-18

Responses to Incidents and Allegations - A.V.20-23

III. Low-Level Waste Program

34. Please include information on the following questions in Section A, as they apply to the Low-level Waste Program:

Status of Materials Inspection Program - A.I.1-3, A.I.6
Technical Quality of Inspections - A.II.7-10
Technical Staffing and Training - A.III.11-15
Technical Quality of Licensing Actions - A.IV.16-18
Responses to Incidents and Allegations - A.V.20-23

IV. Uranium Mill Program

35. Please include information on the following questions in Section A, as they apply to the Uranium Mill Program:

Status of Materials Inspection Program - A.I.1-3, A.I.6
Technical Quality of Inspections - A.II.7-10
Technical Staffing and Training - A.III.11-15
Technical Quality of Licensing Actions - A.IV.16-18
Responses to Incidents and Allegations - A.V.20-23

REGULATION ASSESSMENT TRACKING SYSTEM
RATS DATA SHEET

Tracking Ticket Number:

State: Illinois
 [6 final amendments identified by «] Date:

NRC Chronology Identification	FR Notice (State Due Date)	RATS ID	Proposed/ Final - Comment (Y/N)¹	NRC Review Date	Final State Regulation (Effective Date)
Standards for Protection Against Radiation- Part 20	56 FR 23360 plus others (1/1/94)	1991-3	F-Y	7/23/97	1/1/94
Safety Requirements for Radiographic Equipment-Part 34	55 FR 843 (1/10/94)	1991-1	N/A		N/A
ASNT Certification of Radiographers-Part 34	56 FR 11504 (none)	1991-2	N/A		Not required²
Notification of Incidents-Parts 20, 30, 31, 34, 39, 40, 70	56 FR 64980 (10/15/94)	1991-4	F		1/1/94
Quality Management Program and Misadministrations - Part 35	56 FR 34104 (1/27/95)	1992-1	F- Misadmin. No - QMP		5/2/94
Eliminating the Recordkeeping Requirements for Departures from Manufacturer's Instructions-Parts 30,35	57 FR 45566 (none)	1992-2	N/A		Not required
Licensing and Radiation Safety Requirements for Irradiators-Part 36	58 FR 7715 (7/1/96)	1993-2	N/A		N/A -- see SECY-95-112
Definition of Land Disposal and Waste Site QA Program-Part 61	58 FR 33886 (7/22/96)	1993-3	N/A		N/A -- see SECY-95-112
«Decommissioning Recordkeeping and License Termination: Documentation Additions [Restricted areas and spill sites]-Parts 30, 40	58 FR 39628 (10/25/96)	1993-1	F-N	8/3/00	6/1/00
«Self-Guarantee as an Additional Financial	58 FR 68726	1994-1	F-N	8/3/00	6/1/00

NRC Chronology Identification	FR Notice (State Due Date)	RATS ID	Proposed/Final - Comment (Y/N)'	NRC Review Date	Final State Regulation (Effective Date)
Mechanism- Parts 30, 40, 70	59 FR 1618 (none)				Not required
Uranium Mill Tailings Regulations: Conforming NRC Requirements to EPA Standards-Part 40	59 FR 28220 (7/1/97)	1994-2	N/A		
« Timeliness in Decommissioning Material Facilities-Parts 30, 40, 70	59 FR 36026 (8/15/97)	1994-3	F-N	8/3/00	6/1/00
Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use-Parts 30, 32, 35	59 FR 61767 59 FR 65243 60 FR 322 (1/1/98)	1995-1			
Frequency of Medical Examinations for Use of Respiratory Protection Equipment-Part 20	60 FR 7900 (3/13/98)	1995-2			
Low-Level Waste Shipment Manifest Information and Reporting-Parts 20, 61	60 FR 15649 60 FR 25983 (3/1/98)	1995-3	F		11/11/96
Performance Requirements for Radiography Equipment- Part 34	60 FR 28323 (6/30/98)	1995-4	N/A		
Radiation Protection Requirements: Amended Definitions and Criteria-Parts 19, 20	60 FR 36038 (8/14/98)	1995-5	F	11/24/99	1/1/00
Clarification of Decommissioning Funding Requirements-Parts 30, 40, 70	60 FR 38235 (11/24/98)	1995-6	F		6/1/00
Medical Administration of Radiation and Radioactive Materials-Parts 20, 35	60 FR 48623 (10/20/98)	1995-7	F		5/2/94
10 CFR Part 71: Compatibility with the International Atomic Energy Agency-Part 71	60 FR 50248 61 FR 28724 (4/1/99)	1996-1			

NRC Chronology Identification	FR Notice (State Due Date)	RATS ID	Proposed/Final - Comment (Y/N)¹	NRC Review Date	Final State Regulation (Effective Date)
One Time Extension of Certain Byproduct, Source and Special Nuclear Materials Licenses-Parts 30, 40, 70	61 FR 1109 (none)	1996-2	N/A		Not required
«Termination or Transfer of Licensed Activities: Recordkeeping Requirements-Parts 20, 30, 40, 61, 70	61 FR 24669 (6/17/99)	1996-3	F-N	8/3/00	6/1/00
Resolution of Dual Regulation of Airborne Effluents of Radioactive Materials; Clean Air Act-Part 20	61 FR 65119 (1/9/00)	1997-1			
Fissile Material Shipments and Exemptions-Part 71	62 FR 5907 (none)	1997-4	N/A		Not required
«Recognition of Agreement State Licenses in Areas Under Exclusive Federal Jurisdiction Within an Agreement State-Part 150	62 FR 1662 (2/27/00)	1997-2	F-N	8/3/00	6/1/00
Criteria for the Release of Individuals Administered Radioactive Material-Parts 20, 35	62 FR 4120 (5/29/00)	1997-3	F- Part 20		1/1/00
Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiography Operations-Parts 30, 34, 71, 150	62 FR 28948 (6/27/00)	1997-5	F		11/17/98
Radiological Criteria for License Termination-Parts 20, 30, 40, 70	62 FR 39057 (8/20/00)	1997-6	Addressed via licensing		
Exempt Distribution of a Radioactive Drug Containing One Microcurie of Carbon-14 Urea-Part 30	62 FR 63634 (1/02/01)	1997-7	F-N	5/26/00	7/27/98
Deliberate Misconduct by Unlicensed Persons-Parts 30, 40, 61, 70, 150	63 FR 1890 63 FR 13773	1998-1			

NRC Chronology Identification	FR Notice (State Due Date)	RATS ID	Proposed/Final - Comment (Y/N) ¹	NRC Review Date	Final State Regulation (Effective Date)
	(2/12/01)				
«Self-Guarantee of Decommissioning Funding by Nonprofit and Non-Bond-Issuing Licensees-Parts 30, 40, 70	63 FR 29535 (none)	1998-2	F-N	8/3/00	6/1/00 Not required
License Term for Medical Use Licenses-Part 35	63 FR 31604 (none)	1998-3	N/A		Not required
Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations-Part 34	63 FR 37059 (7/9/01)	1998-4	F		6/23/94
Minor Corrections, Clarifying Changes, and a Minor Policy Change-Parts 20, 35, 36	63 FR 39347 63 FR 45393 (10/26/01)	1998-5	F		1/1/00
Transfer for Disposal and Manifests: Minor Technical Conforming Amendment-Part 20	63 FR 50127 (11/20/01)	1998-6			
Radiological Criteria for License Termination of Uranium Recovery Facilities-Part 40	64 FR 17506 (6/11/02)	1999-1			
Requirements for Those Who Possess Certain Industrial Devices Containing Byproduct Material to Provide Requested Information-Part 31	64 FR 42269 (none)	1999-2	F		6/1/00 Not required
Respiratory Protection and Controls to Restrict Internal Exposure - Part 20	64FR 54543 64 FR 55525 (2/2/03)	1999-3			

- 1.1. (Y/N) Y means "Yes," there are comments in the review letter that the State needs to address. N means "No," there are no comments in the review letter.
2.2. Not required means these regulations are not required for purposes of compatibility.