

DATED: APRIL 28, 1997

SIGNED BY: HUGH L. THOMPSON, JR.

Mr. J. Dale Givens, Secretary
Department of Environmental Quality
P. O. Box 82231
Baton Rouge, LA 70884-2231

Dear Mr. Givens:

On April 10, 1997, the Management Review Board (MRB) met to consider the proposed final Integrated Materials Performance Evaluation Program (IMPEP) report on the Louisiana Agreement State Program. The MRB found the Louisiana program adequate to protect public health and safety and compatible with NRC's program.

Section 5, page 19, of the enclosed final report presents the IMPEP team's recommendations. Note that there is one additional recommendation that was identified at the MRB to implement the requirements of the "Decommissioning Recordkeeping Documentation of Restricted Areas and Spill Sites" through legal binding requirements until the Louisiana draft regulations have been promulgated. Our understanding is that by conference call during the MRB meeting, W. H. Spell, Administrator, Radiation Protection Division, committed to implement this recommendation, as necessary. We have received your letter dated February 28, 1997, and Mr. Spell's letter dated March 4, 1997, and appreciate the positive actions that you and your staff have taken and are continuing to implement with regard to our comments. No response to this letter is necessary.

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

I appreciate the courtesy and cooperation extended to the IMPEP team during the review and your support of the Radiation Control Program. I look forward to working with you in the future.

Sincerely,

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

Enclosure:
As stated

cc: H. Bohlinger, Deputy Secretary
Department of Environmental Quality

G. Von Bodungen, Assistant Secretary
Office of Air Quality and Radiation Protection

R. Wascom, Deputy Assistant Secretary
Office of Air Quality and Radiation Protection

W. H. Spell, Administrator
Radiation Protection Division

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF LOUISIANA AGREEMENT STATE PROGRAM

OCTOBER 7-11, 1996

FINAL REPORT

U.S. Nuclear Regulatory Commission

1.0 INTRODUCTION

This report presents the results of the review of the Louisiana radiation control program. The review was conducted during the period October 7-11, 1996, by a review team comprised of technical staff members from the Nuclear Regulatory Commission (NRC) and the Agreement State of Georgia. Team members are identified in Appendix A. The review was conducted in accordance with the "Interim Implementation of the Integrated Materials Performance Evaluation Program Pending Final Commission Approval of the Statement of Principles and Policy for the Agreement State Program and the Policy Statement on Adequacy and Compatibility of Agreement State Programs," published in the Federal Register on October 25, 1995, and the September 12, 1995, NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period September 4, 1993, to October 11, 1996, were discussed with Louisiana management on October 11, 1996.

A draft of this report was issued to Louisiana for factual comment on February 14, 1997. The State of Louisiana responded in letters dated February 28, 1997 and March 4, 1997 (attached). The State's comments were incorporated into the final report. The Management Review Board (MRB) met on April 10, 1997, to consider the proposed final report. Based on the existing NRC compatibility policy and the IMPEP evaluation criteria, the review team recommended that Louisiana's performance with respect to the indicator, Legislation and Regulations, be found unsatisfactory. The compatibility findings for the Louisiana program were re-evaluated and revised by the MRB based on the draft of Louisiana's "Decommissioning Recordkeeping Documentation of Restricted Areas and Spill Sites" regulation. The MRB recommended that the State implement the requirements in the draft Louisiana's "Decommissioning Recordkeeping Documentation of Restricted Areas and Spill Sites" regulation through the legal binding requirements on a case-by-case basis until the regulation is promulgated as final. The MRB final recommendation for Legislation and Regulations is satisfactory with recommendations for improvement. The MRB considered and concurred in the team's overall recommendation and found the Louisiana radiation control program was adequate to protect public health and safety and compatible with NRC's program.

The Louisiana Office of Air Quality and Radiation Protection, within the Louisiana Department of Environmental Quality, is the agency that regulates environmental radiation issues and radiation hazards. The Secretary of this department is appointed by, and reports directly to, the Governor. Within the Office of Air Quality and Radiation Protection, headed by an Assistant Secretary who is also appointed by the governor and who reports to the secretary, the Radiation Protection Division (RPD) administers the State's radiation protection program. The RPD organizational charts are included as Appendix B. The Louisiana program regulated 511 specific licenses at the time of the review. In addition to radioactive materials, the Division is responsible for control of machine-produced radiation, environmental surveillance, emergency planning and response, and radon control. 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 Louisiana.

In preparation for the review, a questionnaire addressing the common and non-common indicators was sent to the State on August 8, 1996.

Louisiana provided its response to the questionnaire on September 16, 1996. A copy of that response is included as Appendix C to this report.

The team's general approach for conduct of this review consisted of: (1) examination of Louisiana's response to the questionnaire, (2) review of applicable Louisiana statutes and regulations, (3) analysis of quantitative information from the Division's licensing and inspection data base, (4) technical review of selected files, (5) field accompaniments of three Louisiana 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 non-common indicator and made a preliminary assessment of the radiation control program's performance.

Section 2 below discusses the State's actions in response to recommendations made following the previous review. Results of the current review for the IMPEP common performance indicators are presented in Section 3. Section 4 discusses results of the applicable non-common indicators, and Section 5 summarizes the review team's findings and recommendations.

2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

The previous routine review concluded on September 3, 1993, and the results were transmitted to Mr. Kai David Midboe, then Secretary of the Department of Environmental Quality on April 11, 1994. Findings of adequacy and compatibility were withheld because of significant deficiencies in the Indicator, Adequacy of Product Evaluations and the fact that certain regulations were not promulgated within the 3-year timeframe recommended by NRC. NRC conducted a follow up review of the program on February 21-24, 1995, to evaluate the effectiveness of the State's actions to address the recommendations from the 1993 review, and to assess the current status of the State's program. The results of this follow up review were transmitted to Mr. William A. Kucharski, a later Secretary, Department of Environmental Quality on May 9, 1995. The Secretary was informed that the NRC staff determined that at that time, the Louisiana program for regulation of agreement materials was adequate to protect public health and safety, and compatible with the regulatory program of the NRC, since all of the recommendations were determined to have been satisfactorily resolved.

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 Staffing and Training, (3) Technical Quality of Licensing Actions, (4) Technical Quality of Inspections, 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 inspection of new licenses, and timely dispatch of inspection findings to licensees. This evaluation is based on Louisiana's questionnaire responses to this indicator, from data gathered independently from the State's licensing

and inspection data tracking system, the examination of licensing and inspection casework files, and interviews with managers and staff.

Review of the State's inspection priorities showed that the State's inspection frequencies for various types, or groups, of licenses are at least as frequent as similar license types, or groups, listed in the NRC Inspection Manual Chapter 2800 (IMC 2800) schedule of frequencies. Inspection frequencies under the State's system range from one year to five year intervals. The State requires more frequent inspections in some license categories to maintain consistency with X-ray inspections. Some medical facilities are inspected on a two-year frequency when compared with an NRC three-year or five-year frequency; broad academic licenses have a one-year frequency compared with an NRC three-year frequency; and portable gauges have a four-year frequency compared with the NRC's five-year frequency. Level and density gauge licensees who participate in the State's self-inspection program are extended to a five-year inspection cycle. The inspection frequencies of licenses selected for license and inspection file reviews were compared with the frequencies listed in the State's data system and were consistent with the State's system and at least as frequent as similar license types under the IMC 2800 system.

In their response to the questionnaire, Louisiana indicated that, as of October 12, 1996, only one core inspection identified in IMC 2800 was overdue by more than 25 percent of the NRC frequency. This number is well within the 10 percent criterion for overdue inspections of Management Directive 5.6. This licensee was inspected on September 27, 1996.

One new licensee was inspected at nine months rather than at a six-month interval. One initial inspection was also found to be overdue but a memo was in the file indicating that the inspection period had been extended because the licensee had not received radioactive material. One other initial inspection of a new licensee was performed at a period greater than the recommended six month period. During the review, it appeared that this license was overdue by approximately 11 months. Subsequent to the review, the State has determined that an earlier inspection by a regional inspector had been performed. The inspection was performed at 8 months rather than 6 months.

Discussions with management and staff were conducted to determine how inspections are assigned and entered into the system. The administrative staff enters data on a monthly basis. It is noted that the State uses a six-month interval for generating a printout. Quality checks on the data are performed by inspectors and management using the updated printout. Once reviewed, the computer printout is used for inspection planning.

The timeliness of the issuance of inspection findings was evaluated during the inspection file review. Twenty-one files were examined. They covered approximately 50 inspections performed during the review period. Most inspection correspondence was sent to the licensee within 30 days after an inspection. Inspections performed from late 1994 to early 1996 had noticeably longer times between the inspection and the issuance of the inspection report or Confirmatory Orders. Several cases spanned a 10-month interval. One action was not issued, at the direction of the Assistant Secretary, due to the long delay between the inspection and the enforcement action. This licensee was promptly reinspected.

In early 1996, the long period of time between inspection and enforcement action reversed. The State identified several problems in coordinating its inspection and enforcement programs and corrected them. Inspection and enforcement actions are now being processed in a timely manner.

Louisiana does not collect data on reciprocity inspections in a manner similar to NRC. A direct statistical correlation cannot be made to the suggested IMPEP criteria. The State reported in their response that 901 requests for reciprocity were received during the review period. In response to the draft report, the State reported that a further review of the Division's database on reciprocity inspections during the review period indicated a total of 855 reciprocity notifications, of which 249 were Priority 1, 2 or 3. These 249 notifications represented 23 different companies, some of which have Louisiana licenses. In addition, a Texas industrial radiography licensee also having a Louisiana license, comprised 92 of the 249 notifications (~37%). The State reported the reciprocity database was originally written in a manner that allowed overwriting of the previous inspection performance data for a particular year. The State believes that this occurred because it was not anticipated that more than one reciprocity inspection would be performed during the year. This resulted in a licensee having only one reported (database) inspection in any year. The numbers previously reported by the review team were lower than the actual number of inspections performed by the Division for a particular year and also lower than the total for the three-year review period. As a result of the State's additional review, a total of 10 inspections of 23 licensees were retrieved from the database for the review period of July, 1993 through June, 1996.

Based on the new information submitted by the State, approximately 43% of the licensees entering the State were inspected at least once. The State noted that actual inspections were more than 10, indicating a larger percentage of licensees being inspected during reciprocity visits. The State indicated that their familiarity with specific licensees in addition to compensating measures such as annual, or more frequent, inspections by other regulatory authorities and information sharing between the agencies provide sufficient assurance for safety.

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

3.2 Technical Staffing and Training

Issues central to the evaluation of this indicator include the radioactive materials program staffing level, technical qualifications of the staff, training, and staff turnover. To evaluate these issues, the review team examined the State's questionnaire responses relative to this indicator, interviewed RPD management and staff, and considered any possible workload backlogs. The RPD organization chart shows that the Division was funded for 44 persons at the time of the review.

The Compliance Branch consists of the Surveillance Section (8 positions), the Inspection & Quality Assurance Section (5 positions), and the Enforcement Section (7 positions). The Surveillance Section personnel are located at seven RPD Regional Offices throughout the State, and the personnel perform both materials inspections and x-ray inspections. The Inspection & Quality Assurance Section personnel are

located in Baton Rouge, and they also perform both materials and x-ray inspections. The personnel (15) utilized for materials inspections were all determined to be qualified and trained in health physics and inspection procedures. These inspectors have completed the core courses for the types of licenses they are qualified to inspect. The team did not identify any inspection backlogs.

The Regulatory Branch consists of a Licensing & Registration Section (9 positions), and an Emergency Planning and Response Section (6 positions). All of the materials licensing functions and the sealed source and device evaluations are performed by 3 persons in the Licensing & Registration Section. The Licensing Coordinator performs most of the materials licensing actions, and was determined to have many years experience in that function in addition to the NRC licensing training. Two other staff persons and the Section Manager, have also been trained in Licensing Practices. In addition, a Nuclear Engineer attended the NRC Sealed Source & Device Workshop in September of 1995. The team did not identify any licensing or device evaluation backlogs during the review. Additional discussion of Sealed Source & Device (SS&D) personnel training is covered in Section 4.2.2.

The RPD has established qualifications for the technical positions of Environmental Radiation Specialist (ERS) I, ERS II, and ERS III. Applicants at the entry level (ERS 1) are required to have a baccalaureate degree and are assigned duties in the x-ray program until additional training is received in health physics, nuclear medicine uses, materials licensing, inspection procedures, industrial radiography, well logging, and emergency response. After sufficient training and experience, the ERS I's are eligible for promotion and for assignment to materials licensing and/or inspection duties. Staff are assigned increasingly complex licensing duties under the direction of senior staff, and accompany experienced inspectors during increasingly complex compliance inspections. Staff are required to demonstrate competence during accompaniments by the supervisor. This information was verified through discussions with managers and staff, review of the questionnaire response, and review of the position descriptions. The team determined that all staff utilized for the agreement materials program were technically qualified by evidence of their training and experience; however, additional training for the SS&D program is discussed under Section 4.2.2.

The RPD Administrator reported that several persons (12) had left the Division since the 1993 review, many left for higher paying jobs, or to return to graduate school. Retaining qualified personnel was reported as a continuing problem. The Division, however, has been able to recruit qualified people and provide training as needed to maintain the workload in the agreement materials area. The organization chart showed 2 vacancies in the Emergency Response Section, and 1 vacant ERS III position and a vacant Coordinator position in the Inspection & Quality Assurance Section. The Coordinator's position duties are currently being fulfilled with an ERS III person. The State has demonstrated a willingness to provide training for their staff and to shift qualified personnel into the vacant positions in order to maintain current workload in the agreement materials area.

Based on the training that program personnel have taken during the review period, the State appears supportive of continued staff training, and management demonstrated a commitment to staff training during the

review. However, the State has concerns as to the impact of NRC's change in policy for funding State training will have on their program.

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

3.3 Technical Quality of Licensing Actions

The review team examined completed licenses and casework for 60 license actions in 36 specific license files, representing the work of two license reviewers. The license reviewers and supervisor were interviewed when needed to supply additional information regarding licensing decisions or file contents.

Licensing actions were reviewed for completeness; consistency; proper isotopes and quantities authorized; qualifications of authorized users; adequate facilities and equipment; and operating and emergency procedures sufficient to establish the basis for licensing actions. Licenses were reviewed for accuracy; appropriateness of the license and of its conditions and tie-down conditions; and overall technical quality. Casework was reviewed 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 authorities. The files were checked for retention of necessary documents and supporting data.

The license casework was selected to provide a representative sample of licensing actions which had been completed in the review period and to include work by all reviewers. The sampling included 26 of the State's major licenses and included the following types: source and device manufacturing and distribution, industrial radiography (temporary and fixed job sites), mobile nuclear medicine, teletherapy, academic and medical broad scope, and nuclear pharmacy. Licensing actions reviewed included 2 new, 16 renewals, 38 amendments, and 4 terminations. A list of these licenses with case specific comments can be found in Appendix D.

In general, the review team found that the licensing actions were thorough, complete, consistent, of acceptable or higher quality, and with health and safety issues properly addressed. Special license tie-down conditions were stated clearly, backed by information contained in the file, and inspectable. The nine exemptions identified by the State in the responses to the questionnaire were reviewed for this review period. All of them had valid justifications, including a State analysis to grant an exemption for pipeliner licensees who requested the exemption. Three of the exemptions were granted by letter and the six pipeliner exemptions were granted by a special license condition. The licensee's compliance history was taken into account when reviewing renewal applications as determined from documentation in the license files and/or discussions with the license reviewers.

The review team found that terminated licensing actions were well documented, showing appropriate transfer records and survey records. However, the licensee was not always issued a letter stating that the site could be released for unrestricted use if the site use had involved loose material with a half life of greater than 10 days. The team

recommends that the State adopt a policy of issuing unrestricted release letters in all cases where loose material has been used, and before the license is terminated. The review team found that the State did not have any problem contaminated sites at this time.

The State currently utilizes a standard license condition on broad licenses and other licenses with multiple locations of use of material (multiple sites) that does not differentiate between what radioactive material is authorized at each different site or location of use. This condition could allow all authorized material on the license to be used at all sites listed, and which was not always the intent of the license application reviewer. The State is in the process of amending Condition 1 of licenses which authorize multiple sites of use (use locations). The team recommends that each location of use on multiple site licenses be revised by license condition to specify the material authorized for each different location of use or site.

The State license reviewers acknowledged that licensees have not been notified of the need to file for reciprocity on sites which are exclusive federal jurisdiction according to All Agreement States Letter SP-96-022. Licenses which allow for temporary job sites have not been amended to include a requirement to file for reciprocity when on sites which are exclusive federal jurisdiction. The review team recommends that all licensees be notified according to the All Agreement States Letter SP-96-022 which requests licensees to file for reciprocity when performing work under exclusive federal jurisdiction. Licenses which allow for temporary job sites should be amended to state that a reciprocity request will be filed when conducting work under exclusive federal jurisdiction.

Licenses were renewed on varying frequencies which generally corresponded to the inspection frequency. The longest period for renewal was five years and the shortest period was two years. Licensees are tied down to previously submitted applications and supporting documentation which is no older than seven years. An entirely new application is required at least every seven years to maintain the most current information in the license file.

The license reviewer passes each licensing action up through the supervisory chain for review. All licensing actions are signed by the Assistant Secretary of the Office of Air Quality and Radiation Protection.

The review team found that the current staff is well trained and experienced in a broad range of licensing activities. The casework was reviewed for adequacy and consistency with the NRC procedures. The State does not have official, written administrative procedures for licensing reviews. They follow their licensing guides during the review process to ensure that licensees submit the information necessary to support the license. The licensing guides were very similar to the NRC guides. Based on the review of license files and discussions with the staff, the review team does not believe that written administrative procedures are necessary.

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

3.4 Technical Quality of Inspections

The team reviewed the inspection reports, enforcement documentation, and the database information for more than 50 inspections conducted during the review period. The casework included all but four of the State's materials inspectors. The inspectors not included in the sampling are the newest members of the staff and are not yet fully qualified. The review covered a sampling of the high priority categories of license types as follows: five industrial radiography, five medical, one nuclear pharmacy, one broad medical, one broad academic, one academic, one well logging, and one portable gauge, and five reciprocity inspections. Appendix E provides a list of the inspection cases reviewed with case-specific comments.

In addition, several spot checks were performed on the files to verify proper inspection frequencies and that enforcement correspondence was being maintained in a consistent manner. In almost every case the files selected for review were determined to have the proper inspection frequency. The review of inspection and licensing files was coordinated during the review. This provided some insight into how the State coordinates inspection findings with licensing actions.

The inspection procedures and techniques utilized by the State were reviewed and determined to be consistent with the inspection guidance provided in IMC 2800. The inspection report forms were found to be consistent with the types of information and data collected under IMC 2800. The report forms provided documentation of inspection findings in a consistent manner and in accordance with State policies and internal procedures. The State uses separate inspection report forms for various classes of license types, such as medical, portable gauges, fixed gauges, industrial radiography, accelerators, irradiators, gas chromatographs, broad licenses, and service type licenses. The inspection form provides documentation of licensee and radiation safety organization, scope of the licensee's program, material uses, procedures, leak tests, surveys, instrumentation, dosimetry, incidents, interviews with staff, confirmatory surveys, items of noncompliance, and exit interviews. The inspection form is used to create a narrative report of the inspection.

The review team found narrative inspection reports contained accurate information and met the State's requirements. The narrative report provides a brief, clear, discussion of the inspection and relevant findings. The reports are sufficiently detailed to support escalated enforcement actions. The State's enforcement letters are formal in style, detail and language. The State uses a tracking system to follow enforcement actions. This system was found to be up-to-date and was used to verify the status of pending enforcement actions and in resolving questions regarding missing documentation in the license file.

Most files contained complete inspection findings and related enforcement correspondence. However, the team noted in several cases that certain documents related to inspections or related enforcement documentation were not in the license file. The staff was generally able to locate missing documents for selected files within a short time, but not in all cases as documented in the inspection casework listing, Appendix E. From a "performance" standpoint, the team believes that better quality control is needed to assure that official documentation concerning inspection and enforcement is maintained in the official file folder. The review team suggests that the State re-evaluate their

document control system, and take appropriate measures to assure that files are maintained, complete, and up-to-date.

Three inspector accompaniments were performed by a review team member during the period of September 23-24, 1996. Two inspectors were accompanied in Shreveport, Louisiana area and one in Baton Rouge, Louisiana. The accompaniments in Shreveport involved two fixed radiographic facilities and one field radiography operation. These accompaniments are described in Appendix E. Other inspectors have been accompanied during previous reviews.

During accompaniments, the Louisiana inspectors demonstrated appropriate inspection techniques and knowledge of the State's regulations. The portable instruments used during the inspector accompaniments were observed to be operational and calibrated. The inspectors were observed to have TLD badges, an "Escort" badge, a direct reading dosimeter and alarming rate meter on their person during the inspections. The inspectors were well prepared and thoroughly knowledgeable of the licensees' radiation safety programs. Overall, the technical performance of the inspectors was exceptional. Their inspections conformed to State guidance and were more than adequate in scope and detail to assess radiological health and safety at the inspected facilities.

In response to the questionnaire, the State reported that nine inspectors were accompanied by supervisors during the review period. Based on a review of approximately 60 records, the State appears to have a well organized supervisory accompaniment program. The evaluation forms for each accompaniment were reviewed. The evaluations critically assessed the inspector's ability to conduct inspections of specific types of licensees as specifically indicated when an inspector is qualified to perform specific types of unaccompanied inspections. Supervisors routinely accompany fully trained inspectors on an annual basis.

It was noted that the State has a variety of portable instruments for routine confirmatory surveys and for use during incidents and emergency conditions. The State has sufficient GM tubes, pancake probes, one inch NaI detectors, micro-R meters, and high range instruments. A detector with an alpha scintillator is available in the Baton Rouge office for use by regional inspectors. Each inspector is provided a direct reading dosimeter, a TLD badge, an "Escort" badge, and an alarming rate meter. Portable instruments maintained in the Baton Rouge office were also observed to be calibrated. Program staff explained that instruments are calibrated at least on an annual basis. The State uses a commercial calibration and repair service.

It was found that the State performs both announced and unannounced inspections of materials licensees. Inspections are weighted toward the unannounced type. The State has offices distributed around the State. There was no geographical bias noted in the inspection program. There appeared to be no difference in the quality of inspections between the regional offices or between the regions and the main office in Baton Rouge. There appeared to be no significant difference in inspection frequency, quality or violations discovered between the samples of announced and unannounced inspections that were reviewed.

Inspectors sign all routine enforcement correspondence. All of the inspection results and routine enforcement letters were verified as

having been reviewed and signed by the supervisor before issuing the results to licensees. The review team concluded that this supervisory review enhanced the quality of the inspection and enforcement documents. The inspectors are also cross-trained as license reviewers providing continuity to the regulatory program. The review team agreed with program management that the State's proposed LAN system would allow additional standardization and implementation of inspection modules, enforcement language, and tracking systems.

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

3.5 Response to Incidents and Allegations

In evaluating the effectiveness of the State's actions in responding to incidents and allegations, the review team examined the State's response to the questionnaire regarding this indicator, reviewed the incidents reported for Louisiana in the "Nuclear Material Events Database" (NMED) against those contained in the Louisiana files and reviewed the casework of 14 incident files and two allegation files. No allegations were referred from NRC to Louisiana during period covered by the review. In addition, the review team interviewed the Administrator, the Assistant Administrator, the Manager of the Inspection and Quality Assurance Section and the Manager of the Enforcement Section.

Responsibility for initial response and follow-up actions to materials incidents and allegations rests with the Inspection and Quality Assurance Section. Louisiana procedures require the prompt response by RPD to each incident or allegation. Each incoming notification is discussed with management and staff as appropriate and the response is coordinated with the appropriate field staff including an on-site inspection if appropriate. The managers related that all incidents, complaints, and allegations are evaluated by management, followed up with an inspection if possible, and recorded.

The reviewer examined the State's response and documentation to all 14 events listed in Appendix F and verbally discussed the other events with the Inspection and Quality Assurance Section Program Manager. This effort included the State's incident and allegation process, tracking system, file documentation, and notification of other Federal and State Agencies.

The review team found that the State's responses were well within the performance criteria. Responses were prompt and well-coordinated, and the level of effort was commensurate with health and safety significance. Health Physicists were dispatched to the site when appropriate. The State took suitable corrective and enforcement actions, notified the NRC and other Agencies as appropriate, and followed the progress of the investigation through until close out. Allegations were responded to promptly with appropriate investigations and follow up actions. The State has procedures under their "Sunshine" laws for the control of information, identification protection measures are taken to protect the identity of allengers, and the results of the investigations were documented and provided to the allengers. The review team also found very good correlation of the State's response to the questionnaire, the incident information in the files, and the event information reported on the NMED system printout for Louisiana. Only one discrepancy was noted, in that NMED event number 941466, dated March

18, 1994, was listed as a Baton Rouge, LA event, whereas, the event occurred in Memphis, TN and was followed up by the State of Tennessee. The reason for this discrepancy was that the person (Licensee RSO) that reported the event to the NRC Operations Center resides in Baton Rouge, LA.

The reviewer noted that the State still has a manual system for tracking and processing incidents and allegations. Although no performance deficiencies were noted during the review in this area, the reviewer discussed the merits of computerizing the tracking system, and the utilization of the NRC national system to enter events and document incident findings. In response, Program managers related that the RPD is currently evaluating their needs on a Departmental level for upgrading the various tracking functions. The review team suggested that the State upgrade their system, and implement a computer based system for tracking and documentation of events and allegations.

Based on the IMPEP evaluation criteria, the review team recommends that Louisiana's 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 Regulations, (2) Sealed Source and Device Evaluation Program, (3) Low-Level Radioactive Waste Disposal Program, and (4) Uranium Recovery. Louisiana is not authorized, pursuant to its agreement with NRC, to regulate uranium recovery operations, so only the first three non-common performance indicators were applicable to this review.

4.1 Legislation and Regulations

4.1.1 Legislative and Legal Authority

Along with their response to the questionnaire, the State provided the review team with copies of legislation that affects the radiation control program. The Office of Air Quality & Radiation Protection, Louisiana Department of Environmental Quality, is designated as the State radiation protection agency in the Louisiana Code, Acts 1979. The Louisiana Nuclear Energy and Radiation Control Law (LNERCL) authority is found in Chapter 6, LA R.S. 30:2101 - 2134. Based upon discussions with staff and the State's response to the questionnaire, the review team confirmed that there have been no changes to the LNERCL since the previous review on the regulation of agreement materials. The legislative authority has been reviewed during previous reviews and considered adequate authority to protect public health and safety.

4.1.2 Status and Compatibility of Regulations

Louisiana's Environmental Regulatory Code, Part XV, Radiation Protection, 5th Edition, was updated and published in January 1996. A copy of these regulations was received and evaluated with the State's response to the questionnaire to determine the status and compatibility of the Louisiana regulations. The questionnaire also documents that the regulations are subject to a "sunset" law, and will need to be reviewed in 1999 under the law; however, the review team discussed the impact of the review of the regulations with State management and believes that

the State will be able to accomplish the review with its current resources.

At the time of the February 1995 follow-up review, the State's regulations were found to be compatible with NRC regulations up through the "Quality Management Program and Misadministrations," 10 CFR Part 35 amendment (56 FR 34104) which became effective on January 27, 1992. The reviewer confirmed that these regulations and others needed as of this 1992 date had been adopted. In general, the State's practice has been to adopt needed regulations within the recommended 3-year time frame except as noted below.

Three NRC regulation amendments became effective in 1993 that were listed on the "NRC Chronology of Amendments" as compatibility items, and which needed to be adopted (if appropriate) during 1996. The first regulation was "Licensing and Radiation Safety Requirements for Irradiators," 10 CFR Part 36 (58 FR 7715) that became effective on July 1, 1993. Louisiana does not have any irradiators or license applications that would be subject to these provisions, and has elected to postpone the adoption of the Part 36 irradiator regulations until an application is received. Management related that the State is committed to regulating these types of irradiators in compliance with Part 36 provisions if the need arises. In response to the questionnaire, the State will utilize license conditions to incorporate the provisions of Part 36, if an application for a large irradiator were to be received. The review team concurs on this position. The second regulation is the "Definition of Land Disposal and Waste Site QA Program," 10 CFR Part 61 (58 FR 39628) that became effective on July 22, 1993. This regulation is required only for those States with a low-level radioactive waste disposal facility; however, since Louisiana has authority for disposal of NORM waste, the State has drafted a revised definition of "Land Disposal Facility" that is compatible with the NRC definition. The third regulation is "Decommissioning Recordkeeping Documentation of Restricted Areas and Spill Sites," 10 CFR Parts 30 and 40 (58 FR 39628) that became effective on October 25, 1993. Louisiana has drafted equivalent regulations for public comment, but they have not yet become effective. Subsequent to the review, the State reported that both revisions were submitted to the department's Regulatory Development Division on March 20, 1997, for publication of a "Notice of Intent" in the Louisiana Register on April 10, 1997. Following the State's administrative procedures, a public hearing will be held, comments will be addressed and, if necessary, the proposed regulations will be revised. Louisiana anticipates completion about August 20, 1997. NRC has reviewed these regulations and informed the State by letter dated April 10, 1997 that the draft regulations were compatible. The adoption of these regulations does not meet the 3-year timeframe for adoption of regulations needed for compatibility.

The other regulations that will be needed for adoption are identified from the "NRC Chronology of Amendments" as follows:

- "Self-Guarantee as an Additional Financial Mechanism," 10 CFR Parts 30, 40, and 70 amendments (58 FR 68726 and 59 FR 1618) that became effective on January 28, 1994. Note, this rule is designated as a Division 2 matter of compatibility. Division 2 compatibility allows the Agreement States flexibility to be more stringent (i.e., the State could choose not to adopt self-guarantee as a method of financial assurance). If a State chooses not to adopt this

regulation, the State's regulation, however, must contain provisions for financial assurance that include at least a subset of those provided in NRC's regulations, e.g., prepayment, surety method (letter of credit or line of credit), insurance or other guarantee method (e.g., a parent company guarantee).

- "Timeliness in Decommissioning of Materials Facilities," 10 CFR Parts 30, 40, and 70 amendments (59 FR 36026) that became effective on August 15, 1994.
- "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, 60 FR 322) that became effective on January 1, 1995.
- "Frequency of Medical Examinations for Use of Respiratory Protection Equipment," 10 CFR Part 20 amendments (60 FR 7900) that became effective on March 13, 1995. Note, this rule is designated as a Division 2 matter of compatibility. Division 2 compatibility allows the Agreement States flexibility to be more stringent (i.e., the State could choose to continue to require annual medical examinations).
- "Performance Requirements for Radiography Equipment," 10 CFR Part 34 amendments (60 FR 28323) that became effective on June 30, 1995.
- "Radiation Protection Requirements: Amended Definitions and Criteria," 10 CFR Parts 19 and 20 amendments (60 FR 36038) that became effective August 14, 1995.
- "Clarification of Decommissioning Funding Requirements," 10 CFR Parts 30, 40, and 70 amendments (60 FR 38235) that became effective November 24, 1995.
- "Compatibility with the International Atomic Energy Agency," 10 CFR Part 71 amendment (60 FR 50248) that became effective April 1, 1996.
- "Low-Level Waste Shipment Manifest Information and Reporting," 10 CFR Parts 20 and 61 amendments (60 FR 15649, 60 FR 25983) that will become effective March 1, 1998. Louisiana and other Agreement States are expected to have that equivalent rule effective on the same date.

The review team examined the procedures used in the State's regulation promulgation process and found that the public is offered the opportunity to comment on proposed regulations and a public hearing that follows the comment period. The procedures also require the proposed regulations, proposed hearing date, hearing comments and analysis, and the final regulations to be placed on the Department's internet home page. Draft copies of the proposed regulations for "Decommissioning Recordkeeping Documentation of Restricted Areas and Spill Sites," "Definition of Land Disposal and Waste Site QA Program," and "Timeliness in Decommissioning" were provided during the review, and the final regulations will be submitted to NRC.

The review team recommends that the State evaluate the process for promulgating compatible regulations to better ensure that the State meets the three-year time frame.

The team notes that NRC staff is currently reviewing all Agreement State equivalent regulations to Part 20, Standards for Protection Against Radiation. These reviews are being conducted outside the IMPEP process and the States will be notified of the results.

Based on the existing NRC compatibility policy and the IMPEP evaluation criteria, the review team recommended that Louisiana's performance with respect to the indicator, Legislation and Regulations, be found unsatisfactory. The compatibility findings for the Louisiana program were re-evaluated and revised by the MRB based on the draft of Louisiana's "Decommissioning Recordkeeping Documentation of Restricted Areas and Spill Sites" regulation. The MRB recommends that the State implement the requirements in the draft Louisiana's "Decommissioning Recordkeeping Documentation of Restricted Areas and Spill Sites" regulation through the legal binding requirements on a case-by-case basis until the regulation is promulgated as final. The MRB final recommendation for Legislation and Regulations is satisfactory with recommendations for improvement.

4.2 Sealed Source and Device Evaluation Program

In evaluating the State's SS&D program, the review team evaluated the information provided by the State relative to this indicator in its response to the questionnaire, reviewed the casework, registration sheets and background files that were available, for all, except one, of the certificates of registration sheets issued since September 1993 and the 1994 follow-up review. The review team did not re-evaluate the issuance of the SPEC Model 150 registration sheet because the State worked closely with the NRC during this review process. A former State staff member spent a week at NRC headquarters working with NRC staff on the technical review of this application. During the IMPEP review, the State was unable to locate some of the proprietary information that had been stored separately from the non-proprietary information for several SS&D applications. Subsequent to the review, the State has reported that the proprietary information has been located. During the review, NRC staff and Louisiana staff had recalled working with this information. Further, the proprietary files were reviewed during the 1994 follow-up visit. It is important to note that although some pertinent written supporting information and drawings could not be located, the review team was able to use verbal NRC staff and State staff interviews to address issues and questions that were identified during the IMPEP review. This was only possible because the State and NRC exchanged a lot of information during this review period. The States's staff qualifications and handling of incident and defects associated with sources and devices were also reviewed.

The State suffered a significant set back in its SS&D program by the loss of a staff member who performed the majority of the product evaluations. No reviews have been completed under the program since the loss of this staff member. There are presently two administrative actions waiting review and one unusual technical review involving splicing of source assembly cables. The technical staff reviews the product using NRC guidance and regulatory guides in this area. The second signature is performed by the program manager; in this case the program manager's review is only for administrative type issues. A

second, less technical review, is conducted by the Administrator on all sheets before they are distributed, but the Administrator does not sign them.

4.2.1 Technical Quality of the Product Evaluation Program

The review team reviewed the files that could be located and performed staff interviews for the nine new or revised SS&D registry sheets issued since the September 1993 review, including the state review and approval for licensing purposes of new radiography sources and brachytherapy sources and a custom gauging source. Modification to the Omnitron remote afterloading brachytherapy device registration was also made to allow for, and storage of, higher activity sources in the storage container prior to installation in the afterloader. The SS&D registry sheets issued by the State and evaluated by the review team are listed in Appendix G. Overall, the quality of the evaluations was good with minor technical comments and showed a drastic improvement since the September 1993 review of the program. The review team found that the State had developed procedures for preserving the integrity of proprietary information furnished by the manufacturer for issuing SS&D registry sheets; however, they were not able to locate the files for review during this evaluation. The missing information is necessary to assess the effect of a change to a radiography source as a result of some problems in the field. Note, the State had reported that the files had been located. It is suggested that the State review this data before making a determination of acceptability of the source. The review team found that the State's plan to develop and modify registration sheets identified in the 1993 review had not progressed. With the implementation of NRC 10 CFR 34.20 equipment requirements, the registration sheets identified in the 1993 review which required modification, are for products that are not legal to use. The State did not expend any additional resources to address this issue nor did they implement the additional staff review as stated in the plan. The review team identified the following items that need action by the State: (a) An additional staff member with industry experience in source fabrication, equipment design, and fabrication should be available to supplement the staff responsible for review of the product evaluation. This item is critical now, given the lack of experience with the industry of the State lead technical reviewer. (b) Review propriety information that was previously missing before final action is taken on pending source and device amendment requests. This is of particular importance because of a pending request to splice/repair source assemblies by using a compression sleeve in the middle of the cable. The State must carefully review this proposed change for affect on the flexibility and on the endurance of the radiography system. c) Determine how the custom gauging source chains are held together when they are placed in use as insertion gauges.

4.2.2 Technical Staffing and Training

The State was developing a two-person team both with nuclear engineering degrees to conduct product reviews. Both persons attended the NRC Workshop on SS&D evaluations. The loss of the more experienced member of this team poses a challenge for the State. The newest addition to the team demonstrated to the review team the ability to understand and interpret the information submitted by applicants as described in the performance criteria. This member has attended the workshop but has not performed independent SS&D evaluations. The State staff discussed with the IMPEP review team a request granted for this State reviewer to work

with the Sealed Source Safety Section at NRC Headquarters, which the Sealed Source Safety Section has extended. The State's management is considering that option. The State expressed concern about the need for attending virtually all the NRC courses and the lack of State funding to pay for NRC course training. The review team is aware that the loss of a fully trained and experienced reviewer presents potential for weakness to develop in the program. However, we believe that these potential weaknesses can be offset by: (a) an additional staff member with industry experience in source fabrication, equipment design, and fabrication available to supplement the staff responsible for review of the product evaluation identified above in Section 4.2.1, and (b) implementing a training program for SS&D technical reviews, to develop an understanding of the industry and its unique environmental factors that are associated with the use and manufacture of sources and devices. The review team recommends that the State develop and implement a training program for SS&D reviewers.

4.2.3 Evaluation of Defects and Incidents Regarding SS&Ds

The State evaluated incidents associated with two radiography cameras, the SPEC 2-T and the SPEC 150. The SPEC 2-T incident was not fully investigated because the effective date of the NRC equipment performance rule made this camera no longer legal to use. The SPEC 150 camera was investigated, and the vendor took corrective action in one case to replace a drive cable connector with a stainless steel part and in another case to redesign the source assembly to eliminate the solid connector locking ball assembly to reduce the possibility of source hangups. Because of the loss of staff, the State has not notified other regulatory authorities of this design modification. The review team recommends that the State follow up on this incident to ensure that the SS&D sheet is modified and properly distributed.

Based on the IMPEP evaluation criteria, the review team recommends that the State of Louisiana's performance with respect to the indicator, Sealed Source and Device Evaluation Program, be found satisfactory with the recommendations for improvement noted above.

4.2.4 Site Visit

On October 8, 1996, NRC staff and Louisiana staff performed a site visit of Amersham Corporation's service center located in Baton Rouge, LA. One objective of the site visit was to develop an understanding of the operation and its interaction with the Amersham facility in Burlington, Massachusetts. The second objective was to introduce the new sealed source and device reviewer to the types of radiography equipment, equipment problems, and service facilities that the radiography industry depends on. The visit was also timely because this reviewer was reviewing a radiography source assembly, and he had never seen an assembly or how it relates to the radiography camera, guide tubes, collimators, and control cables. We understand that the State has plans for this reviewer to visit with other source and device vendors and users as part of his development plan.

The Amersham facility provides service, repair and source exchange operations for mostly local radiography firms. The facility also repairs and calibrates survey meters, and analyzes leak test samples. The facility employs about five people and also sells an entire line of film supplies and supporting equipment needed by radiographers. The facility is audited periodically by Amersham Massachusetts for

conformance to the corporate quality assurance program. The facility has a small hot cell with additional shielding behind the unit for performing source exchanges. The Louisiana reviewer was able to witness first hand the effects of environmental conditions and abuse of radiography equipment.

4.3 Low-Level Radioactive Waste (LLRW) Disposal Program

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

5.0 SUMMARY

As noted in Sections 3 and 4 above, the review team found the State's performance with respect to each of the common performance indicators to be satisfactory and the non-common indicators Legislation and Regulations and Sealed Source and Device Evaluation Program to be satisfactory with recommendations for improvements. Accordingly, the team recommended, and the MRB concurred in finding the Louisiana program to be adequate to protect public health and safety and compatible with NRC's program.

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

1. The team recommends that the State adopt a policy of issuing unrestricted release letters in all cases where loose material has been used, and before the license is terminated (Section 3.3).
2. The team recommends that each location of use on multiple site licenses be revised by license condition to specify the material authorized for each different location of use or site (Section 3.3).
3. The review team recommends that all licensees be notified according to the All Agreement States Letter SP-96-022 which requests licensees to file for reciprocity when performing work under exclusive federal jurisdiction. Licenses which allow for temporary job sites should be amended to state that a reciprocity request will be filed when conducting work under exclusive federal jurisdiction (Section 3.3).
4. The review team suggests that the State re-evaluate their document control system, and take appropriate measures to assure that files are maintained complete and up-to-date (Section 3.4).

5. The review team suggests that the State upgrade their tracking system, and implement a computer based system for tracking and documentation of events and allegations (Section 3.5).
6. The review team recommends that the State evaluate the process for promulgating compatible regulations to better ensure that the State meets the three-year time frame (Section 4.1.2).
7. The MRB recommends that the State implement the requirements in the draft Louisiana's Decommissioning Recordkeeping Documentation of Restricted Areas and Spill Site regulation through legal binding requirements on a case-by-case basis until the regulation is promulgated as final (Section 4.1.2).
8. The review team identified the following items and recommends action by the State: (a) An additional staff member with industry experience in source fabrication, equipment design, and fabrication should be available to supplement the staff responsible for review of the product evaluation. This item is critical now, given the lack of experience with the industry of the State lead technical reviewer. (b) Review proprietary information that was previously missing before final action is taken on pending source and device amendment requests. This is of particular importance because of a pending request to splice/repair source assemblies by using a compression sleeve in the middle of the cable. The State must carefully review this proposed change for effect on the flexibility and on the endurance of the radiography system. (c) Determine how the custom gauging source chains are held together when they are placed in use as insertion gauges (Section 4.2.1).
9. The review team recommends that the State develop and implement a training program for SS&D reviewers (Section 4.2.2).
10. The review team recommends that the State follow up on the incident associated with the two radiography cameras to ensure that the SS&D sheet is modified and properly distributed (Section 4.2.3).

LIST OF APPENDICES AND ATTACHMENTS

Appendix A	IMPEP Review Team Members
Appendix B	Louisiana RPD Organization Charts
Appendix C	Louisiana's Questionnaire Response
Appendix D	License File Reviews
Appendix E	Inspection File Reviews
Appendix F	Incident File Reviews
Appendix G	Sealed Source and Device Evaluation Reviews

APPENDIX A
IMPEP REVIEW TEAM MEMBERS

Name	Area of Responsibility
Richard L. Woodruff, RII	Team Leader Technical Staffing and Training Response to Incidents and Allegations Legislation and Regulations
James Myers, OSP	Status of Materials Inspection Program Technical Quality of Inspections
Elizabeth Drinnon, Georgia	Technical Quality of Licensing Actions
Steve Baggett, NMSS/IMNS Program	Sealed Source and Device Evaluation

APPENDIX B

LOUISIANA RDP ORGANIZATION CHARTS

APPENDIX C

Approved by OMB¹
No. 3150-0183
Expires 4/30/98

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

QUESTIONNAIRE

Name of State: LOUISIANA
Reporting Period: September 4, 1993 to October 12, 1996

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 (issued 4/17/95). 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>
George R. Meckstroth, Ph.D.	5 years	4th Qtr. '94	21 months

This inspection was conducted on September 27, 1996.

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.

Periodically, the "inspections due list" is reviewed by both of the program managers, who identify those overdue and assign them to an inspector for completion. The next time the list is reviewed, those which have still not been done are given higher priority.

3. Please identify individual licensees or groups of licensees the State/Region is inspecting less frequently than called for in NRC Inspection Manual Chapter 2800 (issued 4/17/95) and state the reason for the change.

Estimated burden per response to comply with this voluntary collection request: 60 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 (3150-0052), Office of Management and Budget, Washington, DC 20503. NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

None is inspected less frequently.

4. How many licensees filed reciprocity notices in the reporting period?

901 licensees filed reciprocity notices during the reporting period.

- a. Of these, how many were industrial radiography, well-logging or other users with inspection frequencies of three years or less?

Two-hundred, twenty-six (226) were users with inspection frequencies of three (3) years or less.

- b. For those identified in 4a, how many reciprocity inspections were conducted?

Five (5) (We believe this is probably a one-year figure, due to the database.)

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

Fifty-five (55)

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.

Not Applicable

II. Technical Staffing and Training

7. 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:

<u>NAME</u>	<u>POSITION</u>	<u>AREA OF EFFORT</u>
<u>ADMINISTRATIVE SECTION</u> (See Attachment A for Organizational Chart)		
William H. Spell	Administrator	100% Administration
Stanley Shaw, Ph.D.	Ass't Administrator (Regulatory Branch)	100% Administration
Thomas H. Patterson	Ass't Administrator (Compliance Branch)	100% Administration

LICENSING & REGISTRATION SECTION

James W. Sanford, Ph.D.	Program Manager	90% Administration, 10% Licensing
Diane Ausbrooks	Coordinator	100% Licensing & Registration
Jason Talbot	ERPS III	99% Licensing, 1% Emer. Response
Sami Aouad	ERPS II	99% Licensing, 1% Emer. Response
Carole Tilley	ERPS II	99% x-ray registration, 1% E. R.

SURVEILLANCE SECTION

Richard Penrod	Program Manager	70% Compl., 25% Admin., 5% E.R.
Anne Troxler (was Brannon)	ERPS III	100% Compliance
Julian Baidy	ERPS II	100% Compliance
Jerry Gilmore	ERPS II	100% Compliance
Hung "Ricky" Nguyen	ERPS II	100% Compliance
Michael Sullivan	ERPS II	100% Compliance
Kim Wiebeck	ERPS II	100% Compliance
Douglas Seymour	ERPS I	100% Compliance

INSPECTION AND QUALITY ASSURANCE SECTION

Michael E. Henry	Program Manager	50% Compl., 45% Admin., 5% E.R.
Vacant (detailed to Enf. P.M.)	Coordinator	70% Compl., 25% Admin., 5% .R.
Joseph Noble	ERPS III	50% Agree. Mat., 50% MQSA
Jennifer Elee	ERPS II	10% Agree. Mat., 90% MQSA
Russell Clark	ERPS II	100% Compliance
Bennifer Pate	ERPS II	50% Compliance, 50% MQSA

ENFORCEMENT SECTION

Jason Mason	Program Manager	50% Compliance, 50 % Admin.
Albert LaGroue	ERPS III	95% Compliance, 5% Emerg. Resp.
Dwayne Stepter	ERPS II	95% Compliance, 5% Emerg. Resp.
Serge' Nelson	ERPS II	100% Compliance
John M. Schlenker	Coordinator	90% Laboratory, 5%Compl., 5% E.R.
Sue Smith	ERPS II	95% Laboratory, 5% Emerg. Resp.
James Pate	ERPS I	95% Laboratory, 5% Emerg. Resp.

EMERGENCY PLANNING AND RESPONSE SECTION

Prosanta Chowdhury	Program Manager	75% Admin., 25% Emerg. Resp.
Soumaya Ghosn	Coordinator	90% Emerg. Resp., 10% Admin.
Thomas Bickham, III	ERPS III	95% Emerg. Resp., 5% other

n.b. The above listings do not include all vacant professional positions.

8. 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.

Russell Clark: employed 9/93; B.S. in physics; no previous radiation experience; attended 5-week Basic Health Physics Course; nuclear medicine course; NRC transportation course; radiography licensee 40-hour radiation safety training course

Carole Tilley: B.S. in mathematics; no previous HP experience; works in X-ray registration

Ricky Nguyen: B.S. in electrical engineering; attended 5-week Basic Health Physics Course; RERO training; one-week Nuclear Medicine Course; two-day Inspection Procedures Seminar, one-day seminar on sampling techniques; one-week HAZMAT course; one-day seminar on nuclear pharmacies; two-day seminar on linear accelerators and HDR afterloaders; 2.5 years in health physics

Mike Sullivan: B.S. in physics; attended 5-week Basic Health Physics Course; RERO training; two-week MQSA course; one-day nuclear medicine seminar; one-week EPA Inspection Procedures Course; two-day seminar on linear accelerators and HDR afterloaders; 1.5 years in health physics

Kim Wiebeck: B.S. in Radiological Technology; attended 5-week Basic Health Physics Course; RERO training; one-week nuclear medicine course; HAZMAT training; one-day seminar on nuclear pharmacies; 1.4 years in health physics

Doug Seymour: B.S. in mathematics; attended two-day seminar on sampling techniques; HAZMAT training; ½ year in health physics

9. Please list all professional staff who have not yet met the qualification requirements of license reviewer/materials inspection staff (for NRC, Inspection Manual Chapters 1245 and 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.

Requirements for license reviewers include NRC Licensing, industrial radiography, well-logging and medical isotopes courses. In addition, there is considerable on-the-job training with senior personnel.

Jason Talbot needs industrial radiography and well-logging courses.

Sami Aouad needs virtually all courses.

Joe Noble needs well-logging course - is scheduled for October.

Michael Sullivan needs well-logging course - is scheduled for October.

Jennifer Elee needs 5-week Basic Health Physics Course, nuclear medicine, well-logging, and industrial radiography courses.

Russell Clark needs well-logging and industrial radiography courses.

An attempt will be made have these people take most of the necessary courses by the end of 1997, but this will largely depend on availability of spaces and funding.

The tentative training schedule, below, applies to all new employees unless they possess previous experience or equivalent course work. On-the-job training is given by a more senior inspector or supervisor. The future of the division's formal course work depends on the support obtained from outside sources, particularly from the NRC and other federal agencies.

At present, the division intends to furnish all the training needed, either through the NRC offerings, another outside entity, or through in-house training courses. The Surveillance Section has only one inspector who has not begun RAM inspection training (Doug Seymour). Mike

Sullivan, Ricky Nguyen, and Kim Wiebeck are in various stages of completion of their RAM inspection training.

The first exposure of an inspector to RAM is an extension of the medical x-ray program. The training begins with nuclear medicine after about one year of experience in the medical area. The OJT period is typically three months. As soon as scheduling allows, the inspector is enrolled in the NRC'S nuclear medicine course. After mastering nuclear medicine inspection, the individual proceeds to brachytherapy, linear accelerators and cobalt units, and HDR afterloaders. After the formal training course and OJT are completed, the inspector's medical training is complete.

The five-week Basic Health Physics Course is scheduled within 1.5 to 2 years after employment, if possible and if needed.

After obtaining the previous experience in health physics, the inspector begins training in the industrial uses of RAM. The initial area of training is fixed and portable level and density gauges, followed by well-logging and industrial radiography. When possible, the inspector attends an industrial gauge training course offered by industry. Other training courses will be scheduled as soon as possible during this time period and as the division's budget will allow. These courses include, but are not limited to, inspection procedures, well-logging, industrial radiography, and transportation. The typical inspector requires approximately three years to complete the entire training program.

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

Karen Fisher-Brasher; Clifford Russell; Angela Stam; Mike Fontenot; Dustin Hite; Denise Blereau; Robin Raspberry; David Zaloudek; Russell Patton; Guy Miro; Mike Jarrett; Mel Hebert;

III. Technical Quality of Licensing Actions

11. Please identify any major, unusual, or complex licenses which were issued, received a major amendment, terminated or renewed in this period.

Biomedical Research Foundation - new license for PET studies in north Louisiana

All major licenses were renewed during this period. No major licenses were terminated.

12. Please identify any new or amended licenses added or removed from the list of licensees requiring emergency plans?

None

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

Exemptions were issued to: Mobil-Lab, XRI, Global X-Ray, Gulf Coast Engineering, Certified Testing & Inspection, Avondale Shipyard, and American Oilfield Divers. These licensees were granted exemptions to continue using pipeline-type exposure devices on pipelines.

In addition, Mr. John Warren was granted an exemption to part of the requirement to be a qualified radiological physicist. Mr. Warren has a B.S. degree in chemistry and meets all other requirements.

Mr. James Spradley was granted an exemption to act as the RSO for Tiger X-Ray, which he owns. He has had more than 20 years experience in industrial radiography, but he does not have a radiographer certification card. His company does limited work in industrial radiography.

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

All licensing guides were revised during the reporting period. They were updated to reflect the requirements of the latest regulations, which were generally more stringent.

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

Not Applicable

IV. Technical Quality of Inspections

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

No changes have been made.

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

<u>Supervisor</u>	<u>Inspector</u>	<u>License Cat.</u>	<u>Date</u>
Richard Penrod	Julian Baidy	PG*	Jan '94
"	"	IRO	Mar '94
"	"	IRO	Apr '94
"	"	FG	Jun '94
"	"	IRF	Aug '94
"	"	WL	Oct '94
"	"	IRF	Oct '94
"	"	WL	Apr '95
"	"	IRO	Apr '95

"	"	IRF	Aug '95
"	"	IM	Nov '95
"	"	IRF	Apr '96
"	"	IRF	Apr '96
"	"	IRF	Apr '96
"	"	IRF	May '96
"	Ricky Nguyen	IM	Oct '95
"	"	FG	Mar '96
"	"	WL	Aug '96
"	Jerry Gilmore	IRO	May '94
"	"	IRF	May '94
"	"	IM	Nov '94
"	"	WL	Sep '94
"	"	FG	Dec '94
"	"	IRO	Apr '96
"	"	IRF	Apr '96
"	Ann Troxler	IM	Mar '94
David Zaloudek	"	FG	Dec '93
"	"	FG	Feb '94
Richard Penrod	"	IM	Mar '94
"	"	FG	Dec '94
"	"	FG	Oct '94
"	"	IRF	May '95
"	"	IRO	May '95
"	"	IRO	May '95
"	"	IRF	May '95
Mike Fontenot	"	MD	Aug '95
*Please see Legend, next page.			
Richard Penrod	Ann Troxler	IRF	Apr '96
"	"	IRF	Jul '96
"	Kim Wiebeck	IM	Aug '96
"	Mike Sullivan	IM	Feb '96
Mike Henry	Mike Fontenot	IRF	Sep '93
Jay Mason	"	FG	Mar '95
"	"	IRF	Aug '95
"	"	IRO	Sep '95
"	"	WL	Mar '96
Mike Henry	Joe Noble	IM	Sep '93
Jay Mason	"	IM	Feb '94
"	"	IM	Jul '94
"	"	IM	Sep '94
Mike Henry	"	IM	Jan '95
Jay Mason	"	IRO	May '95
"	"	NP	May '95
"	"	IM	Jul '95
"	"	IM	Nov '95
"	"	NP	May '96
"	Russell Clark	FG	Mar '96
"	"	IM	Mar '96
"	"	IRF	Jun '96
"	"	FG	Jul '96
"	"	WL	Jul '96

***Legend: IRO - industrial radiography office; IRF - industrial radiography field; PG - portable gauge; FG - fixed gauge; WL - well-logging; IM - institutional medical; MD - sealed source manufacturer**

18. 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.

The procedure is for accompaniments of each inspector by a coordinator or above every six months and yearly by the program manager. Accompaniment documents are on file and will be provided, if requested, during the review.

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

Typical instrumentation possessed by inspectors for radioactive material inspections includes the following:

NaI probes
Ludlum, Model 13 with pancake probe and 1" x 1"
Ludlum, Model 5
Ludlum, Model 19
Ludlum, Model 3
One alpha probe is available in the division for the Model 3, as needed

Routinely, calibration is performed by Amersham Corporation, Baton Rouge, yearly or after repairs. Some survey meters are calibrated quarterly.

V. Responses to Incidents and Allegations

20. Please provide a list of the most significant incidents (i.e., medical misadministration, over-exposures, lost and abandoned sources, incidents requiring 24 hour or less notification, etc.) that occurred in the Region/State during the review period. For Agreement States, information included in previous submittals to NRC need not be repeated. The list should be in the following format:

<u>LICENSEE NAME</u>	<u>LICENSE #</u>	<u>DATE OF INCIDENT/REPORT</u>		<u>TYPE OF INCIDENT</u>
		<u>Year 1993</u>		
Ind. Rad. Mant. & Supply	LA-4342-L01	3/1/93	3/1/93	Equip. Failure/Excessive Exposure
Exxon Refinery	LA-1345-L01	8/2/93	8/6/93	3 gauges damaged in Fire

Inspection Specialists	LA-4266-L01	5/7/93	1/14/94	Excessive Exposure
Continental Resources	none	11/24/93	----	Release of material
Louisiana Civil Defense	none	3/4/93	3/4/93	Box contaminated w/Ra-226
Halliburton	LA-2353-L01	3/24/93	3/25/93	Lost Sources
Southern Scrap	none	5/21/93	5/21/93	Co-60 contaminated scrap
St. Francis Med. Ctr.	LA-0193-L01	1/19/93	1/19/93	Teletherapy: "Wrong Patient"

Year 1994

Gobal X-Ray	LA-0577-L01	5/1/94	5/2/94	Radiographic Camera Overboard
Chem. Waste Management	LA-4187-L01	4/25/94	5/3/94	Leaking G.C. Source
Chem. Waste Management	LA-4187-L01	6/6/94	6/6/94	Leaking E.C. Source
Louisiana State University	LA-0001-L01	5/16/94	5/17/96	Lost Source - 100 microCi, I-125
Source Prod. & Equip. Co.	LA-4342-L01	10/6/94	10/10/94	Rad. Camera lock failure
Western Atlas	LA-2187-L01	6/12/94	12/30/94	Irretrievable well-logging source
Omnitron International	LA-6430-L01	12/22/94	12/23/94	Transportation "packing wrong"

Year 1995

Omnitron International	LA-6430-L01	9/14/95	9/14/95	Transportation "packing wrong"
Louisiana State Police	none	12/20/95	12/21/95	Kr-85 "pipe bomb"

Year 1996

X-Ray Inspection	LA-2918-L01	3/2/96	3/4/96	Rad. Camera lost overboard
Halliburton Energy	LA-2353-L01	6/23/96	6/24/96	Lost Source
IMC Agrico	LA-2206-L01	7/12/96	7/12/96	Release of Material
Southern Diagnostics	LA-6629-L01	5/13/96	5/13/96	Lost Source
Mobile-Lab	LA-1888-L01	9/11/96	9/12/96	Camera lost overboard (retrieved)

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?

In December, 1994, an Industrial Nuclear model IR-100 was received by Source Production and Equipment Company with the source improperly secured. This information was presented to the California program director and the NRC.

a. For States, was timely notification made to the Office of State Programs? For Regions, was an appropriate and timely PN generated?

See letter to State of California, with a copy to the NRC, signed by William H. Spell, dated December 12, 1994, regarding above incident. Copy can be provided, if needed.

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.

See response #21, above.

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.

No, there are no such cases undergoing review.

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

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

There are no referred allegations which have not been closed. The Division has made an allegation which, as far as we know, has not been investigated by the NRC to the Division's satisfaction.

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.

A routine review was conducted in September, 1993. Following the review, the NRC withheld findings of adequacy and compatibility, as detailed in the April 11, 1994, letter to the Secretary of the department, signed by Richard L. Bangart.

A follow-up review was conducted by Robert Doda on February 24, 1995. As a result of this review, the NRC determined that the Louisiana program was adequate to protect the public health and safety and was compatible with the regulatory program of the NRC.

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.

The Louisiana Radiation Protection Division was started in 1965 and has had an active radiation protection program ever since. Although growth has been slow and deliberate, the division has been blessed with a core of well-trained and dedicated individuals. New employees, as a rule, have been quite competent. The program became an Agreement State on May 1, 1967.

The staff has been active in state and national activities related to health physics and radiation regulation, serving on numerous task forces and committees whose purpose it is to solve radiation control problems. Because the state has had early and substantial involvement in industrial radiography, it has been a leader in developing portions of the regulatory program which is being used in most states.

Louisiana also collaborated with Texas to develop the first well-logging regulations for the Suggested State Regulations for the Control of Radiation,

which were later copied, in part, by the NRC. A state program member participated for many years in the dosimetry assurance program which evolved into the NVLAP certification program for personnel dosimetry. This state has also enacted the first and most complete set of regulations for naturally-occurring radioactive material (NORM). The state has also provided two Chairpersons for the Conference of Radiation Control Program Directors and is frequently asked to furnish lecturers at NRC training courses. One staff member was loaned to the NRC for a period of three (3) months, with a current invitation from the IAEA for him to help train personnel in Armenia for three weeks in November. These are just a few examples of the active and successful program Louisiana has.

Without doubt, one of the greatest problems faced by the division during the past few years has been the amount of effort required for the NORM program to function as it was established. It is reminiscent of the types of effort faced by environmental departments when faced with establishing a program for locating inactive and abandoned hazardous waste sites. NORM still needs considerable attention, more than it is getting, in fact. It is not going to go away!

Another of the most pressing problems is obtaining sufficient operating revenues. The division is funded entirely through fees and contracts; there is no state general fund money for this division. Although it appears that there is adequate budget, this is realized only if the revenue meets or exceeds projections. This has not happened over the last several years. Consequently, the division has had to maintain several vacancies because in order to increase fees, a 2/3 vote of the Louisiana Legislature is required, thanks to a constitutional amendment passed last year.

Intimately related to the second problem is the third most pressing problem: obtaining and retaining personnel who have a desire to remain with the division and become competent health physicists. During the review period, several highly qualified individuals left for higher paying jobs or to return to graduate school. Industry and other governments are able to offer considerably higher salaries, which leaves the state in a continual training mode. In addition, there has been no across the board cost-of-living adjustment in several years. Actually, there is very little difference in the severity of the three most pressing problems for Louisiana. The order of importance is anybody's guess.

B. NON-COMMON PERFORMANCE INDICATORS

I. Regulations and Legal Authority

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

La. R.S. 30:2001, et seq., covers activities of the entire Department of Environmental Quality. In particular, La. R.S. 30:2101 - 2134 is known as the "Louisiana Nuclear Energy and Radiation Control Law," and this covers activities peculiar to this division.

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

Louisiana's regulations are subject to a "Sunset" law. If not renewed in 1999, the regulations will expire in the year 2000.

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.

We are unable to obtain any details on the compatibility items adopted prior to 1987 when the regulations were codified. The first regulations were promulgated about 1965, to the best of our knowledge. Also, it is difficult to determine the exact date the regulations were adopted between 1988 and 1992.

<u>10 CFR RULE</u>	<u>DATE DUE</u>	<u>DATE ADOPTED</u>
Bankruptcy	2/11/90	4/88
Misadministration	4/90	5/92(?)
Well-Logging	7/90	4/88
NVLAP Certification	3/91	4/88

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.

Attached, please find a document which describes the procedures used for rule-making. The normal time for promulgation of new regulations is six (6) months. (Please see Attachment B.)

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. The table heading should be:

<u>SS&D Registry Number</u>	<u>Manufacturer, Distributor or Custom User</u>	<u>Type of Device or Source</u>
LA-612-S101-S	Source Production & Equipment Company	Radiographic Source
LA-612-S105-S	"	" "
LA-612-S106-S	"	" "
LA-612-D111-S	"	Radiography Exposure Device
LA-0760-D801-S	Omnitron International	Remote After-loading Brachytherapy Unit
LA-0760-D801-S(Rev.)	"	" " "
LA-0760-S102-S	"	Brachytherapy Source
LA-0760-S102-S(Rev.)	"	" "
LA-0760-S103-S	"	" "
LA-112-S113-S	Berthold	Gauge Source

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

The NRC Regulatory Guides for Devices and Sealed Source Evaluations, along with any applicable standards, and NRC training of personnel are used.

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.II.7-10
 Technical Quality of Licensing Actions - A.III.11, A.III.13-14
 Responses to Incidents and Allegations - A.V.20-23

A.II.7 & 8: Sami Aouad ERS II 99% Licensing

A.II.9: Sami Aouad recently transferred to the Licensing and Registration Section from the Enforcement Section (radiological laboratory). He attended the NRC course on Sealed Source and Device Evaluation Procedures. Mr. Aouad has an M.S. Degree in nuclear engineering from LSU.

A.II.10: Mr. Clifford Russell previously performed the SS&D evaluations. Upon his departure, Mr. Aouad assumed responsibility for these evaluations.

A.III.11: None, regarding SS&D evaluations.

A.III.13: No changes in relation to the Sealed Source and Device Evaluation Program.

A.III.14: None, regarding SS&D evaluations

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 Staffing and Training - A.II.7-10
Technical Quality of Licensing Actions - A.III.11, A.III.13-14
Technical Quality of Inspections - A.IV.16-19
Responses to Incidents and Allegations - A.V.20-23

Only to the extent of being a member state of the Central Interstate Low-Level Radioactive Waste Commission is the State of Louisiana involved in low-level waste disposal. The division is involved in NORM waste disposal. Further information can be provided, if needed.

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 Staffing and Training - A.II.7-10
Technical Quality of Licensing Actions - A.III.11, A.III.13-14
Technical Quality of Inspections - A.IV.16-19
Responses to Incidents and Allegations - A.V.20-23

The State is not involved in the uranium mill program. However, uranium is recovered in the state as a byproduct of phosphoric acid production. This is shipped out of state to be converted into fuel for nuclear power plants. More information can be provided, if needed. The state is also monitoring, with great interest, the application for a commercial uranium enrichment facility to be located in north Louisiana. This matter is pending before the Atomic Safety and Licensing Board.

TABLE FOR QUESTION 29.

10 CFR RULE	DATE DUE	DATE ADOPTED	OR	
			CURRENT STATUS	EXPECTED ADOPTION
Any amendment due prior to 1991. Identify each regulation (refer to the Chronology of Amendments)	pre-1992	1/92		
Decommissioning; Parts 30, 40, 70	7/27/91	3/94		
Emergency Planning; Parts 30, 40, 70	4/7/93	11/93		
Standards for Protection Against Radiation; Part 20	1/1/94	1/94		
Safety Requirements for Radiographic Equipment; Part 34	1/10/94	6/95		
Notification of Incidents; Parts 20, 30, 31, 34, 39, 40, 70	10/15/94	1/92		
Quality Management Program and Misadministrations; Part 35	1/27/95	1/92		
Licensing and Radiation Safety Requirements for Irradiators; Part 36	7/1/96	N/A	This will be addressed when, and if, an application is received. It was discussed with OSP and agreed it did not have to be done right now. Will be handled through licensing conditions, etc.	
Definition of Land Disposal and Waste Site QA Program; Part 61	7/22/96		In process	6/97? best guesstima te
Decommissioning Recordkeeping: Documentation Additions; Parts 30, 40, 70	10/25/96		In process	6/97? best guesstima te
Self-Guarantee as an Additional Financial Mechanism; Parts 30, 40, 70	1/28/97	N/A		
Uranium Mill Tailings: Conforming to EPA Standards; Part 40	7/1/97	N/A		

10 CFR RULE	DATE DUE	DATE ADOPTED	OR	
			CURRENT STATUS	EXPECTED ADOPTION
Timeliness in Decommissioning Parts 30, 40, 70	8/15/97		In process	6/97? best guesstimate
Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use; Parts 30, 32, 35	1/1/98		To be done	?
Frequency of Medical Examinations for Use of Respiratory Protection Equipment	3/13/98		To be done	?
Low-Level Waste Shipment Manifest Information and Reporting	3/1/98		To be done	?
Performance Requirements for Radiography Equipment	6/30/98		To be done	?
Radiation Protection Requirements: Amended Definitions and Criteria	8/14/98		To be done	?
Clarification of Decommissioning Funding Requirements	11/24/98		To be done	?
10 CFR Part 71: Compatibility with the International Atomic Energy Agency	4/1/99		To be done	?
Medical Administration of Radiation and Radioactive Materials.	10/20/98		To be done	?
Termination or Transfer of Licensed Activities: Recordkeeping Requirements.	5/16/99		To be done	?

APPENDIX D
LICENSE FILE REVIEWS

File No: 1
Licensee: Lang, Erich K., M.D. License #: LA 3737-L01
Location: New Orleans, LA Termination
License Type: Brachytherapy Reviewer: DBA
Termination Issued: April 18, 1996

Comment:

- a) Confirmed disposition of radioactive material prior to terminating license.

File No: 2
Licensee: Biomedical Research Foundation of NW Louisiana License No: LA 7390-L01
Location: Shreveport, LA New, Amendments No. 1, 2, and 3
License Type: Nuclear Pharmacy Reviewer: JWS
Date Issued: July 20, 1995; February 8, 1996;
July 29, 1996; August 12, 1996

File No: 3
Licensee: Syncor International Corporation License No: LA-3385-L01
Location: New Orleans, LA Renewal, Amendments No. 51 and 52
License Type: Nuclear Pharmacy Reviewer: DBA
Date Issued: February 17, 1995; November 17, 1995;
February 1, 1996

Comments:

- a) Renewal: Changed location of use and terminated one site. Good documentation of surveys. No letter issued to show site released for unrestricted use.

File No: 4
Licensee: Eye, Ear, Nose and Throat Hospital License No: LA-6405-L01
Location: New Orleans, LA Amendment No. 7
License Type: Brachytherapy Reviewer: DBA
Date Issued: August 8, 1995

File No: 5
Licensee: Lafayette General Hospital License No: LA-0581-L01
Location: Lafayette, LA Amendments No. 51, 52, 53, 54 55, 56
License Type: Institutional Nuclear Medicine Reviewer: DBA
Date Issued: May 18, 1994; February 27, 1995;
August 16, 1995; September 7, 1995;
September 9, 1996

Comments:

- a) Amendment 52 added an additional place of use for therapy in an outpatient clinic. The diagram accepted does not show waste storage, radioactive material storage, dose calibrator location, proposed wipe areas, etc. This was the only instance of this type and was discussed with the State's License Reviewer.
- b) Amendment 52, condition 1, authorizes all therapy uses, with no limitations on amounts of activity to be administered, for the outpatient location. This was also discussed with the State's License Reviewer.
- c) Amendment 55 added a physician/RSO to the license that did not meet all of the requirements for an RSO outlined in the State's rules. The RSO

was not an authorized user for therapy procedures but qualified in all other areas.

File No: 6
Licensee: Lafayette General Medical Center License No: LA-5330-L01
Location: Lafayette, LA Amendment 22, 24, 25, Renewal
License Type: Brachytherapy Reviewer: DBA
Date Issued: March 22, 1995; March 31, 1995;
August 2, 1995; August 27, 1996
September 16, 1996

Comments:

- a) Amendment 22 added another site (location of use) to the license. The license condition should specify which "uses" are authorized at each location (site) listed in the license.
- b) Updated HDR afterloader conditions need to be added to the license.

File No: 7
Licensee: Total Safety, Inc. License No: LA-7132-L01
Location: Scott, LA Amendment No. 1
License Type: Consultant Reviewer: DBA
Date Issued: August 6, 1996

File No: 8
Licensee: Highland Park Medical Center License No: LA-3383-L01
Location: Lovington, LA Termination
License Type: Institutional Nuclear Medicine Reviewer: DBA

Termination Issued: February 29, 1996

File No: 9
Licensee: Halliburton Company License No: LA-3928-L01
Location: Duncan, OK Termination
License Type: Density Gauges, Tracer Studies Reviewer: DBA
Termination Issued: July 11, 1996

Comments:

- a) This license had been combined with another Halliburton license and 6 sites of use were originally listed. Two sites on license terminated use of material and three of the sites were put on the other license. One site was for GL devices only and dropped and removed from the license.

File No: 10
Licensee: Eye Physicians and Surgeons, Inc. License No: LA-2837-L01
Location: Hammond, LA Termination
License Type: Eye Applicator Reviewer: EBA
Termination Issued: June 10, 1994

File No: 11
Licensee: Tiger X-Ray, Inc. License No: LA-3121-L01
Location: Baton Rouge, LA Renewal
License Type: Industrial Radiography (Temporary Job Sites) Reviewer: EBA
Date Issued: August 6, 1996

File No: 12

Licensee: Source Production and Equipment Company, Inc License No: LA-2966-L01
Location: St. Rose, LA Amendment 27
License Type: Manufacture and Distribution Reviewer: DBA
Dated Issued: December 12, 1995

Comments:

- a) Requested termination of activities at a site. Good documentation of decommissioning activities. DEQ performed confirmatory survey and issued a free release letter based on the survey prior to amending the license.
- b) The licensee's training course could not be located in the file and was not referenced in the tie-down condition. This was discussed with the license reviewer.

File No: 13

Licensee: Alton Ochsner Medical Foundation License No: LA-0002-L01
Location: New Orleans, LA Amendment No. 26
License Type: Broad Nuclear Medicine Reviewer: DBA
Date Issued: February 16, 1995

Comments:

- a) Condition 1 lists 5 places of use. The way the condition is currently written, it allows for all material (except for material for in vitro use) to be used at all locations including an HDR afterloader. The fifth location is authorized in vitro use and all other material listed on the license. The authorized uses need to be specified for each location.
- b) The HDR afterloader conditions need to be revised.

File No: 14

Licensee: Global X-Ray and Testing Corporation License No: LA-0577-L01
Location: Morgan LA Amendment No's 48, 49, 50,
License Type: Industrial Radiography Renewal (amendment # 52); 53, 54,
(temporary job sites) 55, 56, 57, 61
Date Issued: Amendments 5/16/94, 10/31/94, 2/14/95; Reviewer: JWS
Renewal 2/24/95; Amendments 6/16/95, 8/15/95,
10/11/95, 11/14/95, 12/20/95, 5/20/96

Comments:

- a) Amendment 49 added a new user for calibration only and no documentation of training for calibration was on file, and was discussed with the license amendment reviewer.
- b) Amendment 52 request submitted by the applicant stated that new procedures would be submitted, but the new procedures were not on file. This was also discussed with the license amendment reviewer.
- c) Amendment 52 of the license references a course outline dated February 11, 1988 and March 1, 1988. Also a new course outline was submitted with the renewal application dated February 10, 1993. There was no documentation in the license to clarify which training outline is actually being followed by the licensee which could present a problem during inspections.

File No: 15
Licensee: Beaird Industries, Inc. License No: LA-0576-L01
Location: Shreveport, LA Renewal
License Type: Industrial Radiography (fixed site) Reviewer: EBA
Date Issued: May 21, 1996

File No: 16
Licensee: Cooper Cameron Corporation License No: LA-7095-L01
Location: Ville Platte, LA Amendment No. 3
License Type: Industrial Radiography (fixed site) Reviewer: DBA
Date Issued: August 16, 1995

File No: 17
Licensee: Children's Hospital License No: LA-1448-L01
Location: New Orleans, LA Amendment No. 13
License Type: Institutional Nuclear Medicine Reviewer: DBA
Date Issued: June 7, 1996

File No: 18
Licensee: Ville Platte Medical Center License No: LA-2956-L01
Location: Ville Platte, LA Renewal
License Type: Institutional Nuclear Medicine Reviewer: DBA
Date Issued: October 24, 1995

File No: 19
Licensee: River Parishes Medical Center License No: LA-4435-L01
Location: La Place, LA Renewal
License Type: Institutional Nuclear Medicine/Therapy Reviewer: DBA
Date Issued: July 30, 1996

File No: 20
Licensee: Omnitron International, Inc. License No: LA-6430-L01
Location: Lake Charles, LA Renewal
License Type: Repacking and Distribution Reviewer: DBA
Date Issued: May 7, 1996

File No: 21
Licensee: Schlumberger Technology Corporation License No: LA-2783-L01
License Type: Well Logging and Tracers Amendment No. 64
Date Issued: May 24, 1996 Reviewer: DBA

Comment:

- a) License amended to terminate a place of use. Licensee submitted decommissioning records for site. Loose material was stored at the site. The State should issue a "free release" letter stating that the site could be released for unrestricted use.

File No: 22
Licensee: Schlumberger Technology Corporation License No: LA-3255-L01
Location: Sugarland, TX Amendment No. 21
License Type: Density Gauges Reviewer: DBA
Date Issued: February 6, 1995

File No: 23
Licensee: Willis-Knighton Medical Center
Location: Shreveport, LA
License Type: Teletherapy, Brachytherapy,
and Radiopharmaceutical Therapy
Date Issued: July 9, 1996
License No: LA-1194-L01
Renewal
Reviewer: DBA

File No: 24
Licensee: Louisiana Cardiology Associates
Location: Baton Rouge, LA
License Type: Nuclear Medicine/Private Practice
Date Issued: April 4, 1996
License No: LA-7108-L01
Renewal
Reviewer: DBA

File No: 25
Licensee: Directional Wireline Services, Inc.
Location: Houma, LA
License Type: Well Logging
Date Issued: June 29, 1995
License No: LA-4466-L01
Renewal
Reviewer: DBA

File No: 26
Licensee: Sigma Engineering, Inc.
Location: West Lake, LA
License Type: Portable Gauges
Date Issued: October 3, 1995
License No: LA-7551-L01
New
Reviewer: DBA

File No: 27
Licensee: G.E.C., Inc.
Location: Baton Rouge, LA
License Type: Portable Gauges
Date Issued: May 16, 1995
License No: LA-6357-L01
Amendment No. 4
Reviewer: JWS

File No: 28
Licensee: Louisiana State University
License Type: Broad Academic
Date Issued: 4/27/94; 8/10/94; 12/20/95; 5/2/96
License No: LA-0001-L01
Renewal (Amendment No. 16)
Amendment No. 17, 18
Renewal (Amendment 19)
Reviewer: DBA

File No: 29
Licensee: EarthNet Laboratories, Inc.
Location: Ruston, LA
License Type: Gas Chromatograph
Date Issued: October 4, 1996
License No: LA-3466-L01
Renewal
Reviewer: DBA

File No: 30
Licensee: Acadiana Nucleonics, Inc.
Location: Lafayette, LA
License Type: Mobile Nuclear Medicine
Date Issued: 10/18/95, 5/7/96, 5/24/96, 6/22/96
License No: LA-3257-L01
Renewal (Amendment 43)
Amendment No.'s 44, 45, 46
Reviewer: DBA

Comment:

- a) The license authorizes the storage of a contaminated xenon trap at a hospital location which does not have a license for the storage of the trap. The mobile licensee must remove all materials from the hospital, or the hospital should have a license for storage of the material.

File No: 31

Licensee: Mobile Lab, Inc.

Location: Harvey, LA

License Type: Radiography (temporary job sites)

Date Issued: April 4, 1996

License No: LA-1888-L01

Amendment 49

Reviewer: JWS

File No: 32

Licensee: X-Ray Inspection, Inc.

Location: Lafayette, LA

License Type: Radiography (temporary job sites)

Action Date: August 10, 1996

License No: LA-2918-L01

Amendment 52

Reviewer: JWS

File No: 33

Licensee: Avondale Instruments, Inc.

Location: New Orleans, LA

License Type: Radiography (temporary job sites)

Date Issued: August 10, 1996

License No: LA-0711-L01

Amendment 28

Reviewer: JWS

File No: 34

Licensee: American Oilfield Divers

Location: New Iberia, LA

License Type: Radiography (temporary job sites)

Date Issued: August 26, 1996

License No: LA-5574-L01

Amendment 9

Reviewer: JWS

File No: 35

Licensee: Gulf Coast Engineering

Location: Jefferson, LA

License Type: Radiography (temporary job sites)

Date Issued: September 12, 1996

License No: LA-7415-L01

Amendment 6

Reviewer: DBA

File No: 36

Licensee: Certified Testing and Inspection

Location: Harvey, LA

License Type: Radiography (temporary job sites)

Date Issued: August 10, 1996

License No: LA-5601-L01

Amendment 26

Reviewer: JWS

APPENDIX E
INSPECTION FILE REVIEWS

File No.: 1
Licensee: St. Patrick Hospital
Location: Lake Charles, LA
License Type: Hospital
Inspection Date: 6/11/94
License No.: LA-0997-L01
Inspection Type: Announced, routine
Priority: 4
Inspector: RN

File No.: 2
Licensee: Syncor International
Location: New Orleans, LA
License Type: Pharmacy
Inspection Date: 6/9/96
License Type: LA-3385-L01
Inspection Type: Announced, routine
Priority: 2
Inspector: AT

File No.: 3
Licensee: Oakdale Community Hospital
Location: Oakdale, LA
License Type: Hospital
Inspection Date: 8/29/95
License No.: LA-1458-L01
Inspection Type: Announced, routine
Priority: 4
Inspector: RP

File No.: 4
Licensee: Hood Memorial Hospital
Location: Amite, LA
License Type: Hospital
Inspection Date: 4/3/96
License No.: LA-2541-L01
Inspection Type: Follow up
Priority: 4
Inspector: JE

File No.: 5
Licensee: Global X-ray & Testing
Location: Morgan City, LA
License Type: Field Radiography
Inspection Date: 07/16/96
License No.: LA-0577-L01
Inspection Type: Unannounced
Priority: 1
Inspector: JG

Inspection Date: 07/31/96
Office inspection
Type: Unannounced
Inspector: AT & RP

Inspection Date: 08/07/96
Field inspection
Type: Unannounced
Inspector: JG

Inspection Date: 08/21/96
Field inspection
Type: Unannounced
Inspector: JG

File No.: 6
Licensee: University of Southern Louisiana
Location: Lafayette, LA
License Type: Broad Academic
Inspection Date: 03/22/96
License No.: LA-1794-L01
Inspection Type: Announced, special
Priority: 4
Inspector: JN

Comment:

- a) Licensee response and Form 24 could not be located in the file; however, the enforcement tracking system shows response received and issues resolved on 09/30/96.

File No.: 7
Licensee: Cooper Cameron Corporation
Location: Ville Platte, LA
License No.: LA-7095-L01
Inspection Type: Announced, routine

License Type: Permanent Radiography
Inspection Date: 01/25/96

Priority: 1
Inspector: JG

File No.: 8
Licensee: Prolog
Location: Houma, LA
License Type: Well Logging
Inspection Date: 08/19/96

License No.: LA-5950-L01
Inspection Type: Announced, office
Priority: 4
Inspector: MF & RC

Comment:

a) No isotopes used this location; sources in storage inventoried.

File No.: 9
Licensee: Protechnics International
Location: Houston, TX
License Type: Well Logging
Inspection Date: 06/12/95

License No.: LA-6678-L01
Inspection Type: Announced, special
Priority: 4
Inspector: JB

Comments:

- a) A site map referenced in report missing from the file.
- b) Surveys performed by licensee missing from the file.
- c) Laboratory reports missing from the file.
- d) Licensee's response to enforcement action missing from the file.

File No.: 10
Licensee: Tulane University
Location: New Orleans, LA
License Type: Broad Academic
Inspection Date: 12/14/95

License No.: LA-0004-LA01
Inspection Type: Announced, routine
Priority: 2
Inspector: AT

Comment:

a) The 12/14/95 inspection report is incomplete.

File No.: 11
Licensee: St. Francis Medical Center
Location: Monroe, LA
License Type: Hospital
Inspection Date: 3/20/96

License No.: LA-0193-L01
Inspection Type: Special
Priority: 4
Inspector: JG

File No.: 12
Licensee: Certified Testing
Location: Harvey, LA
License Type: Radiography
Inspection Date: 07/07/95

License No.: LA-5601-L01
Inspection Type: Unannounced
Priority: 1
Inspector: AT

Comments:

- a) Long delay in getting the result of 07/07/95 inspection to licensee.
- b) Clear inspection finding not issued 05/01/96.

Inspection Date: 06/19/95 Type: Unannounced

Inspection Date: 03/22/96 Type: Reciprocity inspection by Mississippi

Inspection Date: 06/27/96 Type: Unannounced

Inspection Date: 07/01/96 Type: Special inspection by Alabama.

File No.: 13
Licensee: Mobile-Lab, Inc.
Location: Harvey, LA
License Type: Radiography
Inspection Date: 02/15/96

License No.: LA-1888-L01
Inspection Type: Unannounced
Priority: 1
Inspector: AT

Comment:

a) File missing CO, licensees' response and Form 24.

Inspection Date: 03/07/96 Type: Reciprocity inspection by Mississippi

Inspection Date: 03/14/95 Type: Unannounced

Inspection Date: 10/19/95 Type: Unannounced

Inspection Date: 03/14/95 Type: Unannounced

File No.: 14
Licensee: Medi-Physics, Inc.
Location: Jefferson, LA
License Type: Pharmacy
Inspection Date: 05/01/96

License No.: LA-5470-L01
Inspection Type: Unannounced
Priority: 2
Inspector: AT, RP

Inspection date: 2/21/94 Type: Unannounced
Inspector: JN, JM

Comment:

a) Form 24 not in the file.

Inspection date: 11/16/94 Type: Unannounced
Inspector: JN, JM

Inspection Date: 04/02/96 Type: Unannounced
Inspector: JN, JM

File No.: 15
Licensee: Allied Signal, Inc.
Location: Geismar, LA
License Type: Level Gage
Inspection Date: 04/03/94

License No.: LA-2356-L01
Inspection Type: 6
Priority: Routine, Unannounced
Inspector: JB, RP

Inspection Date: 11/18/93 Type: Reciprocity inspection by Alabama

Inspection Date: 08/03/94 Type: Routine, Unannounced
Inspector: JG, RP

Inspection Date: 08/04/94 Type: Routine, Unannounced
Inspector: JG, RP

Comment:

a) A clear inspection letter not in the file.

Inspection Date: 12/09/94 Type: Reciprocity inspection by NRC

Inspection Date: 03/02/95 Type: Routine, Unannounced
Inspector: JG, RP

Inspection Date: 06/01/95 Type: Reciprocity inspection by Iowa

Inspection Date: 02/16/96

Type: Unannounced
Inspector: JG, AT

Comment:

a) Licensee response and Form 24 not in the file.

Inspection Date: 04/01/96

Type: Reciprocity inspection by NRC

Inspection Date: 04/24/96

Type: Reciprocity inspection by NRC

Inspection Date: 04/09/96

Type: Unannounced
Inspector: JG, RP

Comment:

a) Licensee response and Form 24 not in the file.

Inspection Date: 04/09/96

Type: Unannounced
Inspector: JG, RP

Comment:

a) CO, licensee response and Form 24 not in the file.

Inspection Date: 05/17/96

Type: Unannounced
Inspector: JB, RP

Inspection Date: 08/23/96

Type: Unannounced
Inspector: JB, RP

Comment:

a) A clear inspection letter not in the file.

Inspection Date: 08/23/96

Type: Unannounced
Inspector: JG, RB

Comment:

a) A clear inspection letter not in the file.

File No.: 16

Licensee: Basin Industrial X-ray

Location: Odessa, TX

License Type: Radiography

Inspection Date: 5/1/96

License No.: LA-03548

Inspection Type: Unannounced

Priority: Reciprocity

Inspector: JG

Comments:

a) Inspection report not in the file.

b) CO sent to licensee summarizing six violations.

c) Licensee response and Form 24 documents not in the file.

File No.: 17

Licensee: Pitt-DesMoines, Inc.

Location: Pittsburgh, PA

License Type: Radiography

Inspection Date: 01/00/95

License No.: LA-04502

Inspection Type: Unannounced

Priority: Reciprocity

Inspector: JG

File No.: 18
Licensee: Edwards Pipeline Testing, Inc. License No.: NRC 34-09037-01
Location: Tulsa, OK Inspection Type: Unannounced
License Type: Radiography Priority: Reciprocity
Inspection Date: Inspector: RF

Comments:

- a) Reviewer could not determine if inspection results were sent to NRC.

File No.: 19
Licensee: Chicago Bridge & Iron License No.: LA-01902
Location: St. James, LA Inspection Type: Unannounced
License Type: Radiography Priority: Reciprocity
Inspection Date: 07/11/96 Inspector: JE

Comment:

- a) Not clear if copy of the report was sent to Texas.

File No.: 20
Licensee: Southern Diagnostics License No.: LA-6629-L01
Location: Lafayette, LA Inspection Type: Special
License Type: Medical Clinic Priority: 4
Inspection Date: Inspector: JN

Comments:

- a) Licensee reported losing a check source.
- b) Compliance Order issued 10/04/96 was not in the file.

File No.: 21
Licensee: Acadiana Nucleonics License No.: LA-3257-L01
Location: Inspection Type: Routine
License Type: Medical Clinic Priority: 4
Inspection Date: Inspector:

File No.: 22
Licensee: Lafayette Central Pharmacy License No.: LA-5115-L01
Location: Lafayette, LA Inspection Type: Special
License Type: Pharmacy Priority: 1
Inspection Date: 05/94 Inspector:

In addition, the following inspection accompaniments were made as part of the on-site IMPEP review:

Accompaniment No.: 1
Licensee: Steel Forgings, Inc. License No.: LA-7292-L01
Location: Shreveport, Louisiana Inspection Type: Unannounced
License Type: cell radiography Priority: 1
Inspection Date: 09/23/96 Inspector: JB

Comments:

- a) Very professional inspection using LA inspection guidance.
- b) Inspector observed activities and interviewed workers.
- c) Inspector took confirmatory measurements.
- d) No incidents occurred since last inspection.

Accompaniment No.: 2

Licensee: Technical Testing Services, Inc.
Location: Shreveport, LA
License Type: cell radiography
Inspection Date: 09/23/96

License No.: LA-3773.L01
Inspection Type: Unannounced
Priority: 1
Inspector: JG

Comments:

- a) Very professional inspection using LA inspection guidance.
- b) Inspector observed activities and interviewed workers.
- c) Inspector took confirmatory measurements.
- d) Inspector identified two violations.

Accompaniment No.: 3

Licensee: Liberty Technical Services, Inc.
Location: Belcher, LA
License Type: field radiography
Inspection Date: 09/23/96

License No.: LA-5055-L01
Inspection Type: Unannounced
Priority: 1
Inspector: JG

Comments:

- a) Very professional inspection using LA inspection guidance.
- b) Licensed activities were completed just before inspector's arrival.
- c) Inspector reviewed logs and records, interviewed workers, had workers demonstrate survey techniques and describe their operating procedures, and took confirmatory measurements.
- d) Inspector identified two violations.

Accompaniment No.: 4

Licensee: Baton Rouge General Medical Center
Location: Baton Rouge, LA
License Type: high dose rate after loader
Inspection Date: 09/24/96

License No.: LA-0003-L01
Inspection Type: Announced
Priority: 1
Inspector: JN

Comments:

- a) RSO was not able to be present during inspection and some records could not be located at the time of the accompaniment.
- b) Very professional inspection using LA inspection guidance.
- c) No licensed activities (procedures) were being conducted at time of inspection.
- d) No violations were found during the accompaniment. Inspector verified that licensee had corrected violations identified on last inspection.
- e) Inspector performed confirmatory measurements and interviewed staff.
- f) Inspector returned to facility within one week to complete the inspection with RSO present. No violations were found at that time.

APPENDIX F
INCIDENT FILE REVIEWS

File No: 1

Licensee: Cooper Industries

License No. LA-7095-L01

Site: Ville Platte Facility

Date of Events: 12-3-93, 1-13-94, 1-20-94, & 3-9-94

Type of Event: Failure of IR sources to return to shielded position

Summary of Incident:

All events were similar and involved Amersham exposure devices at this facility. Sources could not be returned to the shielded position. Amersham replaced the locking mechanism following the first event; the second event was attributed to operator error; the third event was attributed to using old equipment with new, and operator error; and following the fourth event, the equipment was sent to Amersham for evaluation. Amersham has not determined the cause of the event.

Comment:

- a) These incidents were not listed on the questionnaire as "significant events" since there was no significant exposure to workers.

File No: 2

Licensee: Lafayette Police Department

License No: Non-Licensee

Site: Vehicle parked on a public street

Date of Event: 12-18-95

Type of Event: Bomb threat reported to local police

Summary of Incident:

A vehicle on a public street was reported to the local police as having a bomb. The police contacted the State Police bomb squad for assistance and the device was determined to be a 2.5 millicurie krypton-85 check source. The State responded also and took custody of the source, and NRC, Region IV was notified.

File No: 3

Licensee: Omnitron International, Inc.

License No: LA-6430-L01

Site: Lake Charles

Date of Event: 9-15-95

Type of Event: Improperly labeled package

Summary of Event:

An spent iridium-192 source wire was shipped from Seoul, Korea to the Omnitron facility. The source was properly packaged in a shielded and labeled container; however, the container arrived inside an outer unlabeled container, and without proper shipping papers. The source was shipped by air from Korea to Los Angeles, CA and then via UPS to Lake Charles. No contamination or excessive radiation profile was found.

File No: 4

Licensee: Halliburton Engineering Services

License No: LA-2353-L01

Site: Bossier City

Date of Event: 6-23-96

Type of Event: Loss of Control

Summary of Event:

A portable moisture density gauge was found along side a road and the device had fallen from the Licensees vehicle following work at a temporary job site. The device was retrieved by the State prior to the device being reported missing by the licensee. The device was returned to the Licensee.

File No: 5
Licensee: X-Ray Inspection, Inc.
License No: LA-2818-L01
Site: Lafayette
Date of Event: 3-4-96
Type of Event: Lost source overboard
Summary of Event:

The Licensee reported that a 25 curie iridium-192 source was lost when the device was inadvertently dropped into the Gulf of Mexico while being transferred onto an offshore oil rig. The platform is in Federal jurisdiction and in about 200 feet of water. The device was not recovered. Proper notifications were made.

File No: 6
Licensee: Global X-Ray & Testing Corporation
License No: LA-0577-L01
Site: Morgan City
Date of Event: 3-21-94
Type of Event: Drive cable
Summary of Event:

Licensee experienced a problem with the drive cable connector after the source had been returned to the shielded position. The device was a SPEC-2T camera. No excessive exposures.

File No: 7
Licensee: Global X-Ray & Testing Corporation
License No: LA-0577-L01
Site: Gulf of Mexico, Temporary job site
Date of Event: 5-1-94
Type of Event: Lost camera overboard
Summary of Event:

A 100 curie iridium-192 source and camera was lost overboard in the Gulf of Mexico during a storm in about 228 feet of water. The State and the Licensee considered source to be irretrievable.

File No: 8
Licensee: Omnitron
License No: LA-6430-L01
Site: Lake Charles
Date of Event: 12-20-94
Type of Event: Improper shipment from South Korea
Summary of Event:

An HDR afterloader spent source was shipped from South Korea to the Licensee through the State of Texas. The device was not properly packaged but not damaged. Some calculated exposures were 3.5 rem to worker at American Crating, and calculated exposure of 84 millirem to one Fed Ex employee. Packing instructions were reportedly provided by Omnitron prior to the shipment. Proper notifications were made to NRC and to Texas by the State.

File No: 9
Licensee: Louisiana State University
License No: LA-0001-L01
Site: New Orleans
Date of Event: 5-16-94
Type of Event: Loss of Control
Summary of Event:

The Licensee reported the loss of 100 microcuries of iodine-125, the source was picked up as ordinary waste and subsequently buried at a landfill in about 10 feet of soil.

File No.: 10
Licensee: Chem Waste Management
License No: LA-4187-L01
Site: Sulphur
Date of Event: 6-6-94
Type of Event: Potentially Leaking source
Summary of Event:

The Licensee reported a leaking electron capture device but further analysis by manufacturer determined that there was no leakage.

File No: 11
Licensee: Brammer Engineering
License No: (not recorded by reviewer)
Site: Shreveport
Date of Event: 5-2-96
Type of Event: Well head spill
Summary of Event:

The licensee reported that a wellhead valve failed, allowing 4 ounces of iodine-125 to leak onto the ground. The site was secured and the material cleaned up.

File No: 12
Licensee: IMC Agrico
License No: LA-2206-L01
Date of Event: 7-12-96
Type of Event: Release of Material
Summary of Event:

A drum of dirt containing a small quantity of source material was inadvertently sent to a land fill and dumped on the ground. Material was cleaned up by a contractor/consultant from Louisiana State University and disposed.

File No: 13
Licensee: Southern Diagnostics
License No: LA-6629-L01
Date of Event: 5-13-96
Type of Event: Lost source
Summary of Event:
A small check source was lost at the facility and never recovered.

File No: 14
Licensee: Mobile Lab
License No: LA-1888-L01
Site: Gulf of Mexico
Date of Event: 9-11-96
Type of Event: Lost device overboard
Summary of Event:
The radiography device was lost overboard in water and the device was recovered intact, and determined not to be damaged or leaking.

APPENDIX G
SEALED SOURCE AND DEVICE EVALUATION REVIEWS

File No.: 1
Registry No.: LA-612-S-101-S
Manufacturer: Source Production & Equipment Company (SPEC)
SS&D Type: Radiographic Source

Comment:

- a) Amended in entirety as part of implementation of State improvement plan.

File No.: 2
Registry No.: LA-612-S-105-S
Manufacturer: SPEC
SS&D Type: Radiographic Source

Comments:

- a) Design change in Model G-60 source assembly connector that was approved verbally, by State Staff should be made to this sheet.
- b) ANSI 77C32515 is not a classification as in ANSI 1977 (7743515) could not determine if temperature class was a typing error - no supporting documentation could be located regarding this test designation.

File No.: 3
Registry No.: LA-612-S-106-S
Manufacturer: SPEC
SS&D Type: Radioactive Source

Comment:

- a) Amendment to update old SSD as discussed in the States 1994 improvement plan. However, the source assembly model , T-7F approval is missing from approved source listing.

File No.: 4
Registry No.: LA-612-D-111-S
Manufacturer: SPEC
SS&D Type: Radiographic Exposure Device

Comments:

- a) Reviewed as part of the analysis of incidents where connector failed and failure of lock plungers or change of brass connector nut to stainless steel.
- b) Design changes to correct the above problem were verbally approved by State personnel, should have been documented in some supporting data.

File No.: 5
Registry No.: LA-0760-D-801-S
Manufacturer: Omnitron International
SS&D Type: Remote After-Loading Brachytherapy

Comment:

- a) This action made the certificate inactive as per last Agreement State audit.

File No.: 6
Registry No.: LA-0760-D-801-S (Rev)
Manufacturer: Omnitron International
SS&D Type: Remote After-Loading Brachytherapy Unit

Comments:

- a) No background file could be found on this action. Everything is in the confidential file which could not be located.
- b) However, this revision appears to only revise wording and other non-technical changes.

File No.: 7
Registry No.: LA-0760-S-102-S
Manufacturer: Omnitron International
SS&D Type: Remote After-Loading Brachytherapy Unit

Comments:

- a) ANSI testing resulted in classification of 77C53211 yet safety analysis summary used classification of 77C53212. Appeared to be a typing error but could not be reconciled given the lack of supporting information.
- b) June 14, 1995, letter missing from the reference section, this is important information on the use of different lengths of source cable (87" to 102") used in the device.

File No.: 8
Registry No.: LA-0760-S-102 (Rev)
Manufacturer: Omnitron International
SS&D Type: Brachytherapy Source

Comment:

- a) Revision appears only for word engineering and other non-technical changes.

File No.: 9
Registry No.: LA-0760-S-103-S
Manufacturer: Omnitron International
SS&D Type: Brachytherapy Source

Comments:

- a) Extensive technical consultation with NRC and Texas on this evaluation.
- b) Support information is provided for ANSI Classification 77C5321 yet a final certificate was issued using classification of 77C53212. An increase in puncture designations should have supporting test data to justify the increase.
- c) First page should list recommended leak test frequency for consistent format for certificates used in the Nationwide Registry system.
- d) October 25, 1993 and December 17, 1993 letters could not be located, believed to be in the confidential files, relied on interview with NRC and State staff to make the determination on this action.

File No.: 10
Registry No.: LA-112-S-113-S
Manufacturer: Berthold
SS&D Type: Gauge Source

Comments

- a) Custom insertion source. Reviewers should have considered the operational and administrative controls of the Custom User when performing this custom review. The combined engineered safety and the users radiation protection program are to be used when making a

- determination that the custom source is acceptable for licensing purposes.
- b) State used a 3 person signature system including the reviewer, a second technical review and administrative review. Although the second technical review by a person with industry experience was not used as indicated in the States 1994 letter.
 - c) Submission was not clear on how sources chain is held together and if the source chain will maintain integrity for conditions of use noted on the registration sheet.
 - d) General Rule of Thumb -- Custom applications are usually submitted by the user or by vendor through the user. This allows for clear tie down to licensee. In this case, State dealt directly with vendor and may not be able to hold customer accountable for the commitments made in the vendors submission.