UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 11, 1994

Kai David Midboe, Secretary
Department of Environmental Quality
P.O. Box 82263
Baton Rouge, LA 70884-2263

Dear Mr. Midboe:

This is to transmit the results of the NRC review and evaluation of the Louisiana radiation control program conducted by Mr. Robert Doda, Region IV State Agreements Officer, and Raj Kishore, Office of State Programs representative on rotation from the Food and Drug Administration, which was concluded on September 3, 1993. The results of this review were discussed with you, Gus Von Bodungen, Assistant Secretary Department of Environmental Quality, and Hall Bohlinger, Administrator, Radiation Protection Division.

As a result of our review of the State's program and the routine exchange of information between the Nuclear Regulatory Commission and the State of Louisiana, at this time, we are withholding findings of adequacy for the State's program for regulating agreement materials and compatibility with the regulatory programs of the NRC. The findings of adequacy and compatibility are being withheld because of significant deficiencies in a Category I Indicator, Adequacy of Product Evaluations. In accordance with NRC practice for the review of Agreement States, if adequacy is withheld, then compatibility is also withheld.

Adequacy of Product Evaluations is a Category I Indicator. Although the Louisiana staffing and administrative procedures appear adequate to deal with the sealed source and device (SS&D) evaluation workload, the staff was not fully trained in current NRC review procedures for SS&Ds at the time of the review. In addition, Louisiana was accepting vendor data without an independent evaluation of the information and without adequate documentation in SS&D design diagrams. Moreover, we are recommending that the State rescind one of its SS&D sheets and to recertify SS&D sheets identified to the staff during the review.

Subsequent to the program review, staff from the NRC Office of Nuclear Material Safety and Safeguards provided training to Louisiana staff on December 13-15, 1993 on NRC's procedures and guidance on review of SS&D applications. NRC staff has also continued to work closely with Louisiana staff in providing "on-the-job" type training for specific SS&D reviews being completed by Louisiana staff. This effort has involved NRC staff review and comment on initial State evaluation findings for specific SS&D reviews, review of proposed State catalog sheets prepared based on completed reviews and review and comment on proposed requests for additional information prepared by State staff. NRC and State staff believe these technical assistance efforts

have been, and will continue to be, effective in assisting Louisiana staff in gaining further SS&D review experience. Based upon NRC staff experience, it will take a minimum of 6 months of on-the-job training with close State management supervision to obtain an acceptable level of training in SS&D reviews.

The difficulties noted above in the SS&D program area, point to a need for closer management attention to changes in the radiation control program. Since the last program review, staff involved in the sealed source and device area changed, resulting in loss of an experienced sealed source and device license reviewer. Less experienced staff continued to perform evaluations without the benefit of adequate training. Management involvement in program changes such as this should have addressed potential weak areas before they became more significant. In addition, when the program is faced with such a case where you have identified a potential weakness, or have identified a specific need for additional training assistance, NRC is prepared to provide assistance to the program, upon your request, such as the training assistance described above.

We commend the State for its prompt adoption of the amendments equivalent to the revised 10 CFR Part 20 which became effective on November 20, 1993 and were implemented on January 1, 1994.

Our review findings were discussed with the Radiation Protection Division staff during the review meeting. An explanation of our policies and practices for reviewing Agreement State programs is attached as Enclosure 1. We request a response to our comments, attached as Enclosure 2, within 30 days of this letter.

Our review disclosed that all other program indicators were within NRC guidelines. Also, a number of other technical matters were discussed with the radiation control staff and resolved during the course of the review meeting.

I appreciate the courtesy and cooperation you and your staff extended to Messrs. Doda and Kishore during the review meeting. Also, I am enclosing a copy of this letter for placement in the State Public Document Room or to otherwise be made available for public review.

Sincerely, Original Signed By
RICHARD L. BANGART
Richard L. Bangart, Director
Office of State Programs

Enclosures:
As state
Distribution: See next page.
*See previous concurrence. [g:\chm\93letter.la3]

RIV:SAO	DRA	RA	OSP:SA	OSP:SA:AD	OSP:DD
RDoda/cg	JMontgomery	JMilhoan	CMaupin	JSurmeier	SSchwartz
11/19/93*	11/22/93*	11/22/93*	11/23/93*	11/30/93*	11/30/93*

NMSS:D	OSP:D	OGC	DEDS	EDO
RBernero	RLBangart	FCameron	HLThompson	JMTaylor
12/28 /93*	12/10/93* 03/27/94 01/13/94*	12/29/93*	03/ /94	03/ /94

cc w/enclosures:
W. H. Spell, Administrator
Louisiana Radiation Protection Division
NRC Public Document Room
State Public Document Room

bcc w/enclosures:
The Chairman
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Louisiana File ✓	PLohaus

APPLICATION OF "GUIDELINES FOR NRC REVIEW
OF AGREEMENT STATE RADIATION CONTROL PROGRAMS"

The "Guidelines for NRC Review of Agreement State Radiation Control Programs" were published in the Federal Register on May 28, 1992, as an NRC Policy Statement. The guidelines provide 30 indicators for evaluating Agreement State program areas. Guidance as to their relative importance to an Agreement State program is provided by categorizing the indicators into two categories.

Category I Indicators address program functions which directly relate to the State's ability to protect the public health and safety. If significant problems exist in one or more Category I Indicator areas, then the need for improvements may be critical.

Category II Indicators address program functions which provide essential technical and administrative support for the primary program functions. Good performance in meeting the guidelines for these indicators is essential in order to avoid the development of problems in one or more of the principal program areas, i.e., those that fall under Category I Indicators. Category II Indicators frequently can be used to identify underlying problems that are causing, or contributing to, difficulties in Category I Indicators.

It is the NRC's intention to use the categories in the following manner. In reporting findings to State management, the NRC will indicate the category of each comment made. If no significant Category I comments are provided, this will indicate that the program is adequate to protect the public health and safety and is compatible with the NRC's program. If one or more Category I comments are noted as significant, the State will be notified that the program deficiencies may seriously affect the State's ability to protect the public health and safety and that the need for improvement in particular program areas is critical. The NRC would request an immediate response. If following receipt and evaluation, the State's response appears satisfactory in addressing the significant Category I comments, the staff may offer findings of adequacy and compatibility as appropriate or defer such offering until the State's actions are examined and their effectiveness confirmed in a subsequent review. If additional information is needed to evaluate the State's actions, the staff may request the information through follow-up correspondence or perform a follow-up or special, limited review. NRC staff may hold a special meeting with appropriate State representatives. No significant items will be left unresolved over a prolonged period.

If the State program does not improve or if additional significant Category I deficiencies have developed, a staff finding that the program is not adequate will be considered and the NRC may institute procedures to suspend or revoke all or part of the Agreement in accordance with Section 274j of the Act, as amended. The Commission will be informed of the results of the reviews of the individual Agreement State programs, and copies of the review correspondence to the States will be placed in the NRC Public Document Room.

ENCLOSURE 1

SUMMARY OF ASSESSMENTS AND COMMENTS
FOR THE LOUISIANA RADIATION CONTROL PROGRAM
AUGUST 23, 1991 TO SEPTEMBER 3, 1993

SCOPE OF REVIEW

This program review was conducted in accordance with the Commission's Policy Statement for reviewing Agreement State Programs published in the Federal Register on May 28, 1992, and the internal procedures established by the Office of State Programs. The State's program was reviewed against the 30 program indicators provided in the Guidelines. The review included inspector accompaniments, discussions with program management and staff, technical evaluation of selected license and compliance files, and the evaluation of the State's responses to an NRC questionnaire that was sent to the State in preparation for the review.

The 22nd Regulatory Program Review meeting with Louisiana representatives was held during the period of August 30 through September 3, 1993, in Baton Rouge, Louisiana. The State was represented by Hall Bohlinger, Administrator, Radiation Protection Division, and Michael Henry, Program Manager, Inspection and Enforcement Section, and Stan Shaw, Program Manager, Emergency Response and Planning Section. The NRC was represented by Robert Doda, Region IV State Agreements Officer, and Raj Kishore, Office of State Programs representative on rotation from the Food and Drug Administration (FDA). A review of selected license and compliance files was conducted during August 30-31, 1993. A review of legislation and regulations, organization, management and administration, and personnel was conducted on August 31, 1993. Steven Baggett and Thomas Rich of NRC's Office of Nuclear Material Safety and Safeguards conducted reviews of Louisiana's program for sealed source and device evaluations during August 30-31, 1993. A summary meeting regarding results of the regulatory program review was held with Mr. Kai David Midboe, Secretary, Department of Environmental Quality, on September 3, 1993.

In addition to the routine program review, an accompaniment inspection was made at a Louisiana medical licensee: Riverview General Hospital, Baton Rouge, Louisiana, Licensee Number LA-5456-L01.

CONCLUSION

As a result of our review of the State's program and the routine exchange of information between the NRC and the State of Louisiana, the staff identified significant deficiencies in a Category I Indicator, Adequacy of Product Evaluations, which are the basis for the withholding of findings that the Louisiana program for the regulation of agreement materials is adequate to

protect the public health and safety and compatible with NRC's program for regulation of similar materials. The finding of adequacy is being withheld until improvements have been made in the Adequacy of Product Evaluations Category I Indicator. In accordance with NRC policy for the review of Agreement States, if adequacy is withheld, then compatibility would also be withheld.

STATUS OF PROGRAM RELATED TO PREVIOUS NRC FINDINGS

The previous NRC program review was concluded on August 23, 1991, and comments and recommendations were sent to the State in a letter dated October 18, 1991. At that time, the program was found to be adequate to protect the public health and safety; however, a finding that the program was compatible with the NRC's program for the regulation of similar materials was not made due to several overdue regulations. These regulations were included in a revision to the State's regulations that was sent to NRC in January 1992. As a result, NRC was able to make a finding that the Louisiana agreement materials program was adequate and fully compatible with the NRC's program for radiation control in a letter dated February 21, 1992.

Other comments and recommendations from the previous program review were followed up and the State's responses were evaluated for adequacy. All previous comments and recommendations have been closed out.

CURRENT REVIEW COMMENTS AND RECOMMENDATIONS

The Louisiana radiation control program satisfies the Guidelines in 29 of 30 indicators. The State did not meet the Guidelines in a Category I Indicators, Adequacy of Product Evaluations. In addition, comments and recommendations are provided in three other indicators.

1. Status and Compatibility of Regulations (Category I Indicator)

Comment

The Division adopted its equivalent of 10 CFR Part 20, "Standards for Protection Against Radiation," on November 20, 1993 and the "Safety Requirements for Radiographic Equipment," 10 CFR Part 34 amendments (55 FR 843) which were needed for adoption by January 10, 1994 were adopted through an emergency rulemaking on January 1, 1994. In addition, the "Emergency Planning," 10 CFR Parts 30, 40, and 70 amendments that were needed for adoption by April 7, 1993 (54 FR 14061) were adopted as final rules on February 20, 1994.

The State is also in the progress of adopting the following compatibility regulations.

* "Notification of Incidents," 10 CFR Parts 20, 30, 31, 34, 39, 40, and 70 amendments (56 FR 40757) which must be adopted by October 15, 1994.

- "Quality Management Program and Misadministrations," 10 CFR Part 35 amendment (56 FR 153) which must be adopted by January 27, 1995.

As a matter separate from this review, we would like to bring to the State's attention other regulations needed for compatibility. These rules are:

- "Licenses and Radiation Safety Requirements for Irradiators," 10 CFR Part 36 (58 FR 7715) which must be adopted by July 1, 1996.

- "Licensing Requirements for Land Disposal of Radioactive Wastes," 10 CFR Part 61 (58 FR 33886) which must be adopted by July 22, 1996.

- "Decommissioning Recordkeeping and License Termination: Documentation Additions," 10 CFR Parts 30, 40, and 70 (58 FR 39628) which must be adopted by October 25, 1996.

Recommendation

We recommend that the above rules and any others needed for compatibility, be promulgated expeditiously as effective State radiation control regulations.

2. Adequacy of Product Evaluations (Category I Indicator)

We reviewed the registration sheets and the background files for technical quality and consistency in the following areas: format, description, labeling, diagrams, conditions of use, prototype testing, radiation levels, quality assurance and quality control, limitations of use and the bases for determining that the sources or device designs are deemed acceptable for licensing purposes. The following registry sheets were reviewed:

1. SPEC..... LA-612-S-101-U

2. SPEC..... LA-612-S-106-U

3. Omnitron... LA-0760-D-101-S

4. Omnitron... LA-0760-S-102-S

Comment 2a.

Although we determined that the Louisiana staffing and administrative procedures appear adequate to deal with the sealed source and device evaluation workload, at the time of the review, the lead reviewer responsible for the Louisiana SS&D reviews had not been fully trained in current NRC review procedures for licensing and inspection of SS&Ds, or on the standard format and content of a registration sheet. In addition, the reviewer had received signature authority to approve SS&D

evaluations without being fully trained. However, subsequent to the program review, staff from the NRC Office of Nuclear Material Safety and Safeguards provided some training to the Louisiana staff on December 13-15, 1993. However, additional training may be needed since it takes from 6 months to one year to complete training in SS&D reviews.

Recommendation 2a.

We recommend that the State continue to implement NRC guidance on SS&D evaluations received during the recent training session and to contact the NRC if training or technical assistance is needed.

Comment 2b.

There is a need for better documentation on source and device compatibility in SS&D design diagrams. Insufficient documentation was contained in the device review files for the four reviews completed during the last two years. The State had accepted vendor data without an independent evaluation of the information and without adequate documentation in SS&D design diagrams.

Recommendation 2b.

The State in conjunction with the licensee (SPEC) should develop and implement a plan to revise the source and device registrations in accordance with the NRC standard format and content guide. The State should obtain sufficient documentation on file to provide for an independent determination on the integrity of the product designs and recertify specific SS&D registration sheets.

Comment 2c.

The Louisiana issued Omnitron registration sheet for the model 2000 device is for a product which has final assembly in Houston, Texas. No formal or informal agreement has been reached with the State of Texas to inspect the Houston facility to determine if the product distributed is in accordance with the information submitted to the State of Louisiana. Louisiana has marginal controls over the distribution of this product from an out-of-state location.

Recommendation 2c.

We recommend that the State rescind the sheet for the Omnitron-2000 device until a cooperative arrangement can be made with Texas to inspect the facility, or have Texas issue the device registration sheet, or require the final assembly back under the control of the State of Louisiana.

3. Status of Inspection Program (Category I Indicator)

Comment

The Radiation Protection Division completed 402 inspections during the current review period. However, one major inspection was not completed within the required inspection interval. In accordance with Louisiana and NRC inspection policies, initial inspections of licenses in inspection priorities 1 through 5 are to be conducted within six months after material is received and operations have begun and inspections of broadscope manufacturing and distribution licenses are to be conducted on an annual basis. However, with Omnitron, License No. LA-6430-L01, there was no six- month initial inspection and there was no first-year annual inspection accomplished for this licensee. This license was first issued in March 1991 and the initial State inspection of this licensee was conducted on April 12, 1993 after a significant misadministration occurred in November 1992. NRC formed an Incident Investigation Team (IIT) to investigate the incident in Pennsylvania (NUREG-1480, dated February 1993), and FDA conducted inspections of the manufacturer in December 1992 and January 1993. Louisiana staff members accompanied the FDA during these inspections.

Recommendation

We recommend the Division institute a quality assurance mechanism to assure that initial inspections and routine inspections of new licenses are accomplished within set inspection priority schedules.

4. Inspection Reports (Category II Indicator)

Comment

SPEC, License No. LA-2966-L01. Inspection reports for 1992 and 1993 were missing from the file and could not be found. The Division staff believes that both inspections were accomplished and one, in particular, was remembered as an inspection with a supervisory review by Jay Mason, Radiation Protection Division.

Recommendation

We recommend the Division institute a quality assurance mechanism to assure that inspection reports are written and secured in the proper files.

SUMMARY DISCUSSION WITH STATE REPRESENTATIVES

A summary meeting to present the results of the regulatory program review was held with Mr. Kai David Midboe, Secretary, Department of Environmental Quality on September 3, 1993. The scope and findings of the review were discussed. He was informed of the significance of the Category I finding regarding the one amendment that had not been adopted by Louisiana within the three year period provided by the NRC for States to adopt compatible regulations, the

emergency planning rule. Messrs. Midboe and Bohlinger decided that the Division could address this problem most efficiently by adopting the compatibility requirement in the next revision of the State's radiation control regulations. The other Category I comment, Adequacy of Product Evaluations and Status of Inspection Program, were accepted by the State officials as program areas that need improvement, and they believed that the problems could be solved quickly by the Division.

Mr. Midboe expressed the State's appreciation for past NRC assistance and training for the Division's staff. He said the Department will continue to support the radiation control program, any NRC-sponsored training courses, and cooperative efforts with the NRC and other Agreement State programs.

A closeout discussion with the radiation control program technical staff was conducted on September 2, 1993. The State was represented by Hall Bohlinger and his radiation control staff. Several general and specific questions were raised by the State representatives. The review guidelines and the State's responses were discussed in detail. In addition, the results of the license and compliance casework reviews were provided to the staff for discussion. An instructional phase was included to reinforce the proper methods to be used by State personnel when notifying NRC of incidents, when using the Sealed Source and Device Registry, and when sending information on enforcement actions to the NRC.

In addition, a meeting was held on August 31, 1993, where Steven Baggett and Thomas Rich of NRC's Office of Nuclear Material Safety and Safeguards, provided current information on NRC's regulatory program for sealed sources and devices, and which included other information on the Sealed Source and Device Registry. Several State questions were answered at this meeting.

Attachment J

REVIEW CONTROL SHEET

1. Radiation Control Program:	LOUISIANA
2. Type of Review:	ROUTINE
3. Dates of Review: Year	1993
a. RCP Office Review	AUGUST 30 – SEPTEMBER 3, 1993
b. Field Evaluations	SEPTEMBER 2, 1993
c. Regional or Other Office or Site Visits	NO OTHERS
d. Visits to State-Licensed Facilities	NO OTHERS
e. Exit meeting	SEPTEMBER 3, 1993
4. Total Field Evaluations	1 Total Licensee Visits 0
5. Period of Review: From	AUGUST 23, 1991 To SEPTEMBER 3, 1993
6. Staff-Days in State: Total	10 ½
a. Regional SAO	4 ½
b. Other Regional Representatives	0
c. Other SP Representatives	3
d. Other NRC Representatives	3
e. Other Review Participants	0
7. Review hours devoted to technical assistance or staff training:	10

Instructions:

1. Enter name of State or Agency.
2. Enter type of review: Routine, Follow-up, Orientation, Special.
3. Year. In items 3.a-e enter dates for each activity, e.g., 3/18, 3/25 or 3/18-23 (or "none").
4. Enter the total number of evaluations and visits during the review period including mid-review or special visits.
5. For routine reviews, enter the last dates of the previous review and the present review. For other reviews, leave blank.
6. Enter the total NRC staff days expended during the review. In items 6.a-e, enter the total staff days for all personnel participating in the review.
7. Estimate the total number of hours spent during the review providing technical assistance or staff training. Include such activities as instructing staff, helping develop procedures, interpreting regulations, explaining NRC reference materials, etc.

REVIEW REFERENCES

FOR

REPORT OF THE EVALUATION OF AGREEMENT STATE PROGRAM

STATE OF LOUISIANA

Period Covered by Review August 1991 - September 1993
Month/Year - Month/Year

Prepared by Robert J. Doda Date September 7, 1993
Review/Team Leader

Contents

Appendix A . . . . . Program Guidelines and State Questionnaire

Appendix B . . . . . State Organizational Charts

Appendix C . . . . . License File Reviews

Appendix D . . . . . Compliance File Reviews

Memorandum From Last Review Visit

APPENDIX A

Attachment E

APPENDIX A

EVALUATION OF AGREEMENT STATE RADIATION CONTROL PROGRAM

PART I
PROGRAM GUIDELINES AND
STATE QUESTIONNAIRE UPDATE

Name of State Program Louisiana

Reporting Period from: August, 1991 to July, 1993

I. LEGISLATION AND REGULATIONS

A. Legal Authority (Category I)

NRC Guidelines: Clear statutory authority should exist, designating a State radiation control agency and providing for promulgation of regulations, licensing, inspection and enforcement. States regulating uranium or thorium recovery and associated wastes pursuant to the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) must have statutes enacted to establish clear authority for the State to carry out the requirements of UMTRCA.

Questions:

1. What changes were made to the State's statutory authority to regulate agreement materials, low level waste disposal, or uranium mill operations in the reporting period?

There have been no changes to the enabling legislation specifically affecting the agreement materials portion of the radiation control program (including low level waste disposal) since June, 1991.

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

No.

B. Status and Compatibility of Regulations (Category I)

NRC Guidelines: The State must have regulations essentially identical to 10 CFR Part 19, Part 20 (radiation dose standards, effluent limits, waste manifest rule and certain other parts), Part 61 (technical definitions and requirements, performance objectives, financial assurances) and those required by UMTRCA, as implemented by Part 40. The State should adopt other regulations to maintain a high degree of uniformity with NRC regulations. For those regulations deemed a matter of compatibility by NRC, State regulations should be amended as soon as practicable but no later than 3 years. The RCP should have established procedures for effecting appropriate amendments to State regulations in a timely manner, normally within 3 years of adoption by NRC. Opportunity should be provided for the public to comment on proposed regulation changes. (Required by UMTRCA for uranium mill regulation.) Pursuant to the terms of the Agreement, opportunity should be provided for the NRC to comment on draft changes in State regulations.

Questions:

1. What is the effective date of the last compatibility-related amendment to the State's regulations?

January 20, 1992.

2. Referring to the latest 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.

10 CFR 20 Standards for Protection Against Radiation
10 CFR 34 Industrial Radiography
10 CFR 30 Emergency Plan

Both 10 CFR 20 and 34 have been proposed; the comment period lasts until September 24 for the Standards, approximately one month later for the radiography rules. Both are expected to be effective by January, 1994.

10 CFR 30 Emergency Plan has not been promulgated, and Louisiana has no licensees for which the rule applies. LRPD began work on the rule September 1, 1993, and plans to complete rule making on or about January 1, 1994.

3. Identify the person responsible for developing new or amended regulations affecting agreement materials.

Jim Sanford

II. ORGANIZATION

Under the Appendix B title sheet provided at the end of this document, please enclose copies of your organization charts as follows:

a) organization chart(s) showing the position of the radiation control program (RCP) within the State organization and its relationship to the Governor and comparable health and safety programs.

b) RCP internal organization charts. If applicable, include regional offices and contract agencies.

All charts should be current, dated, and include names and titles for all positions.

A. Location of the Radiation Control Program Within the State Organization (Category II)

NRC Guidelines: The RCP should be located in a State organization parallel with comparable health and safety programs. The Program Director should have access to appropriate levels of State management. Where regulatory responsibilities are divided between State agencies, clear understandings should exist as to division of responsibilities and requirements for coordination.

Questions:

1. During the reporting period, did the management, program name, or location of the RCP within the State organization change?

No.

B. Internal Organization of the RCP (Category II)

execution of program policy. Where regional offices or other government agencies are utilized, the lines of communication and administrative control between these offices and the central office (Program Director) should be clearly drawn to provide uniformity in licensing and inspection policies, procedures and supervision.

Questions:

1. What changes occurred in the organization of the RCP during the reporting period?

In January, 1992 the Administrator of the Radiation Protection Division changed. During 1992, regional offices were established in the New Orleans, Lafayette, and Natchitoches areas. Along with this regionalization, four inspector positions were added. In February, 1993, the two Assistant Administrator positions which were eliminated in May, 1987 were reestablished and filled. In August, 1993, an additional regional office was established in Monroe.

2. If changes occurred, how have they affected the RCP and its effectiveness?

The backlog of overdue inspections has been reduced substantially; there are no high priority license inspections currently overdue.

C. Legal Assistance (Category II)

NRC Guidelines: Legal staff should be assigned to assist the RCP or procedures should exist to obtain legal assistance expeditiously. Legal staff should be knowledgeable regarding the RCP program, statutes, and regulations.

Questions:

1. If legal assistance was utilized during the reporting period, briefly describe the circumstances.

An attorney from the Department's Legal Division reviews all proposed escalated enforcement actions. In addition, a legal review of all changes to rules is conducted prior to initiating rulemaking. An attorney from the Department's Legal Division or the Attorney General's Office also represents the Division in any enforcement hearings or legal actions involving the Division.

2. Was the legal assistance satisfactory during this period? If not, what should be changed?

In general, the assistance received has been satisfactory. The improvement which would be most beneficial would be the assignment of a single attorney to all Division actions, thus reducing the time needed to familiarize each attorney with Division activities.

D. Technical Advisory Committees (Category II)

NRC Guidelines: Technical Committees, Federal Agencies, and other resource organizations should be used to extend staff capabilities for unique or technically complex problems. A State Medical Advisory Committee should be used to provide broad guidance on the uses of radioactive drugs in or on humans. The Committee should represent a wide spectrum of medical disciplines. The Committee should advise the RCP on policy matters and regulations related to use of radioisotopes in or on humans. Procedures should be

developed to avoid conflict of interest, even though Committees are advisory. This does not mean that representatives of the regulated community should not serve on advisory committees or not be used as consultants.

Questions:

1. Please list the names, affiliations, and terms of the technical committee(s) members.

The Division utilizes the services of a Medical Advisory Committee; the composition of the committee and principal responsibilities are indicated in LAC 33:XV.776. A copy of the current membership is attached (see Attachment 1).

2. If an advisory committee or consultant was used during the reporting period, briefly describe each circumstance (i.e., the subject, the need, the result, and the manner obtained - by meeting, phone call, or letter).

Other than routine semiannual meetings, the services of the Medical Advisory Committee were not utilized during the reporting period.

III. MANAGEMENT AND ADMINISTRATION

A. Quality of Emergency Planning (Category I)

NRC Guidelines: The State RCP should have a written plan for response to such incidents as spills, overexposures, transportation accidents, fire or explosion, theft, etc. The Plan should define the responsibilities and actio8ns to be taken by State Agencies. The Plan should be specific as to persons responsible for initiating response actions, conducting operations and cleanup. Emergency communication procedures should be adequately established with appropriate local, county and State agencies. Plans should be distributed to appropriate persons and agencies. NRC should be provided the opportunity to comment on the Plan while in draft form. The plan should be reviewed annually by Program staff for adequacy and to determine that content is current. Periodic drills should be performed to test the plan.

Questions:

1. Other than the communications list, when was the emergency plan last revised?

The portion dealing with radiological emergencies other than at fixed nuclear facilities was last revised in August, 1993.

2. If the plan was revised since the last review, what changes were made?

Only minor changes updating personnel and facilities have been made.

3. If the plan was substantially revised during the reporting period, was the NRC provided the opportunity to comment on the revision while it was in draft form?

No substantial changes have been made to the plan.

4. When was the emergency communication list last reviewed or revised?

The list of response personnel is updated whenever there are changes; the latest list is dated August 13, 1993.

5. When and how was the plan last tested?

An evaluated exercise is scheduled the week of August 23, 1993.

B. Budget (Category II)2

NRC Guidelines: Operating funds should be sufficient to support program needs such as staff travel necessary to conduct an effective compliance program, including routine inspections, follow-up or special inspections (including pre-licensing visits) and responses to incidents and other emergencies, instrumentation and other equipment to support the RCP, administrative costs in operating the program including rental charges, printing costs, laboratory services, computer and/or word processing support, preparation of correspondence, office equipment, hearing costs, etc. as appropriate. Principal operating funds should be from sources which provide continuity and reliability, i.e., general tax, license fees, etc. Supplemental funds may be obtained through contracts, cash grants, etc.

Questions:

1. Show the amount for funds for the RCP for the current fiscal year obtained from:

a.	State general fund	0
b.	Fees	1944986
c.	Federal grants and contracts (identify) NRC 30000 EPA 89250	119250
d.	Other	5000
e.	Total:	2069236

2. Show the total amounts in the current RCP budget allocated for:

a.	Administration	150000
b.	Radioactive materials	600000
c.	X-ray	525236
d.	Environmental surveillance	269000
e.	Emergency planning	400000
f.	LLW regulation	25000
g.	U-mill regulation	0
h.	Other (radon, non-ioniring, operator credentialing, etc.). Radon	100000
i.	Total:	2069236

3. What percentage of your radioactive materials program is supported by fees?

99%

4. Discuss any changes in program funding that occurred during the reporting period, the reasons for the changes (new programs, change in emphasis, statewide reduction, fee cost recovery percentage, etc.), and how the changes affected the program.

Fees were increased an average of 35% in July, 1992. The increase was justified in three ways: 1) A loss of general funds; 2) An increase in the number of inspectors; and 3) Fees had not changed in over four years, while costs continued to increase. The increases allowed the Division to establish regional offices, and to reduce the backlog of overdue inspections.

5. Overall, is funding sufficient to support all of the program needs? If not, what are the problem areas?

Funding has generally been adequate to support the program. Additional funds could always be used to update/replace equipment and for additional staff.

C. Laboratory Support (Category, II)

NRC Guidelines: The RCP should have the laboratory support capability in-house, or readily available through established procedures, to conduct bioassays, analyze environmental samples, analyze samples collected by inspectors, etc., on a priority established by the RCP.

Questions:

1. Describe changes in your laboratory support, such as new instruments, cutbacks, etc., in this period.

One position was added to the laboratory staff in December, 1991, bringing the staffing level to three.

One Ge(Li) detector was replaced with a Coaxial Germanium detector (40% efficiency).

2. Have there been problems in obtaining timely and accurate lab results? If yes, discuss the circumstances and how the problem might be corrected.

No significant problems have been experienced regarding lab results. As long as staffing is maintained and no significant change in sample load occurs (i.e. NORM samples).

D. Administrative Procedures (Category II)

NRC Guidelines: The RCP should establish written internal procedures to assure that the staff performs its duties as required and to provide a high degree of uniformity and continuity in regulatory practices. These procedures should address internal processing of license applications, inspection policies, decommissioning and license termination, fee collection, contacts with communication media, conflict of interest policies for employees, exchange of information and other functions required of the program. Administrative procedures are in addition to the technical procedures utilized in licensing, and inspection and enforcement.

Questions:

1. Briefly list the changes, such as new procedures, updates, policy memoranda, etc., made in your written

administrative procedures during the reporting period. Include internal processing of license applications, inspection policies, decommissioning and license termination, fee collection, contacts with media, conflict of interest policies for employees, and exchange of information procedures.

A licensing action log was implamented in November, 1992 to track pending license applications, amendments, and terminations.

An enforcement tracking sheet is currently being tested to track the status of enforcement actions.

E. Management (Category II)

NRC Guidelines: Program management should receive periodic reports from the staff on the status of regulatory actions (backlogs, problem cases, inquiries, regulation revisions). RCP management should periodically assess workload trends, resources and changes in legislative and regulatory responsibilities to forecast needs for increased staff, equipment, services and fundings. Program management should perform periodic reviews of selected license cases handled by each reviewer and document the results. Complex licenses (major manufacturers, large scope - Type A Broad, or ones with the potential for significant releases to environment) should receive second party review (supervisory, committee, or consultant). Supervisory review of inspections, reports and enforcement actions should also be performed. When regional offices or other government agencies are utilized, program management should conduct periodic audits of these offices.

Questions:

1. How many management reviews of license cases were performed in this period?

All licensing actions are reviewed by the Licensing & Registration Program Manager and concurred by the Administrator prior to signature by the Assistant Secretary. All radioactive materials inspection reports are reviewed by the Inspection & Enforcement Program Manager or Coordinator. Any enforcement actions (including Notices of Violation) are reviewed by the Program Manager and concurred by the Administrator prior to signature by the Assistant Secretary.

2. Were all license reviewers included in the cases selected for management review? If not, explain.

Yes.

3. What audits were made of regional and contract offices?

Supervisory visits of all regions were made by headquarters staff. All reports prepared by regional inspectors are reviewed (see response to 1., above).

F. Office Equipment and Support Services (Category II)

NRC Guidelines: The RCP should have adequate secretarial and clerical support. Automatic typing and Automatic Data Processing and retrieval capability should be available to larger (300-400 licenses) programs. Similar services should be available to regional offices, if utilized. Professional staff should not be used for fee collection and other clerical duties.

Questions:

1. Has the secretarial and clerical support been adequate during this period? If not, explain.

Yes. The Division has recently hired a receptionist to answer the main telephone line, distribute mail, and assist other clerical staff.

2. What word processing, data base, and spread sheet programs are you using?

Word Processing	**WordPerfect**
Data bases	**FOCUS (on the Department's VAX)**
	dBase
Spread sheets	**Excel**
	Lotus 1-2-3
	Quattro
	20/20

G. Public Information (Category II)

NRC Guidelines: Inspection and licensing files should be available to the public consistent with State administrative procedures. It is desirable, however, that there be provisions for protecting from public disclosure proprietary information and information of a clearly personal nature. Opportunity for public hearings should be provided in accordance with UMTRCA and applicable State administrative procedure laws.

Questions:

1. Have changes occurred in the manner in which you handle public information?

No.

IV. PERSONNEL

A. Qualifications of Technical Staff (Category II)

NRC Guidelines: Professional staff should have a bachelor's degree or equivalent training in the physical and/or life sciences. Additional training and experience in radiation protection for senior personnel including the director of the radiation protection program should be commensurate with the type of licenses issued and inspected by the State. Written job descriptions should be prepared so that professional qualifications needed to fill vacancies can be readily identified.

Questions:

1. Please list all new professional personnel, indicate the degree they received, if applicable, and additional training and years of experience in health physics.

See Attachment 2.

B. Staffing Level (Category II)

NRC Guidelines: Professional staffing level should be approximately 1-1.5 person-year per 100 licenses in effect. RCP must not have less than two professionals available with training and experience to operate RCP in a way which provides continuous coverage and continuity. For States regulating uranium mills and

mill tailings current indications are that 2-2.75 professional person-years' of effort, including consultants, are needed to process a new mill license (including in situ mills) or major renewal, to meet requirements of Uranium Mill Tailings Radiation Control Act of 1978. This effort must include expertise in radiological matters, hydrology, geology, and structural engineering.

Questions:

1. Complete a table listing the professional (technical) person-years of effort applied to the agreement or radioactive material program by individual. Include the name, position, and fraction of time spent in the following areas: administration, materials licensing & compliance, emergency response, LLW, U-mills. If these regulatory responsibilities are divided between offices, the table should be consolidated to include all personnel contributing to the radioactive materials program. If consultants were used to carry out the program's RAM responsibilities, include their efforts. The table heading should be:

NAME	POSITION	AREA OF EFFORT	FTE%

See Attachment 3.

2. Is the staffing level adequate to meet normal and special needs and backup? If not, explain.

Yes.

3. Do you currently have vacancies? If so, when do you expect to fill them?

One vacancy currently exists in the inspection program; efforts are being made to fill this position soon.

C. Staff Supervision (Category II)

NRC Guidelines: Supervisory personnel should be adequate to provide guidance and review the work of senior and junior personnel. Senior personnel should review applications and inspect licenses independently, monitor work of junior personnel, and participate in the establishment of policy. Junior personnel should be initially limited to reviewing license applications and inspecting small programs under close supervision.

Questions:

1. Identify your senior personnel assigned to monitor the work of junior personnel.

Licensing - James W. Sanford and Diane Ausbrooks
Inspections - Jay Mason, Richard Penrod, Toni Metoyer, and David Zaloudek

D. Training (Category II)

NRC Guidelines: Senior personnel should have attended NRC core courses in licensing orientation, inspection procedures, medical practices and industrial radiography practices. (For mill States, mill training should also be included.) The RCP should have a program to utilize specific short courses and workshops to maintain appropriate level of staff technical competence in areas of changing technology.

Questions:

1. Prepare a table listing all of the training courses, workshops, seminars, symposia, etc. that your materials personnel have attended since the last review. The table heading should be:

Student	Course	Sponsor	Dates

See Attachment 4.

2. If any of your materials staff currently need NRC training, please identify the employees and the courses needed.

Denise Bloreau Medical Uses of Radioisotopes, Ind. Radiography
Clifford Russell Licensing Procedures, " "

E. Staff Continuity (Category II)

NRC Guidelines: Staff turnover should be minimized by combinations of opportunities for training, promotions, and competitive salaries. Salary levels should be adequate to recruit and retain persons of appropriate professional qualifications. Salaries should be comparable to similar employment in the geographical area. The RCP organization structure should be such that staff turnover is minimized and program continuity maintained through opportunities for promotion. Promotion opportunities should exist from junior level to senior level or supervisory positions. There also should be opportunity for periodic salary increases compatible with experience and responsibility.

Questions:

1. Identify the technical staff who left the Agreement program during this period and, if possible, give the reasons for the turnovers.

James Miller, Richard Brackin, and Lenny Young all left due to promotion in other programs within the Department.

V. LICENSING

A. Technical Quality of Licensing Actions (Category I)

NRC Guidelines: The RCP should assure that essential elements of applications have been submitted to the agency, and which meet current regulatory guidance for describing the isotopes and quantities to be used, qualifications of persons who will use material, facilities and equipment, and operating and emergency procedures sufficient to establish the basis for licensing actions. Prelicensing visits should be made for complex and major licensing actions. Licenses should be clear, complete, and accurate as to isotopes, forms, quantities, authorized uses, and permissive or restrictive conditions. The RCP should have procedures for reviewing licenses prior to renewal to assure that supporting information in the file reflects the current scope of the licensed program.

Questions:

1. Update the list of the State's major licensees. In addition to the name, license number and type, please indicate if the license is new or was terminated (action). Include:

- o Broad Licenses
- o LLW Disposal
- o LLW Brokers (All Types)
- o Manufacturers and Distributors
- o Uranium Mills
- o Irradiators (Other than Self-Contained)
- o Nuclear Pharmacies
- o Other Licenses With a Potential Significance for Environmental Impact

The table heading should be:

Licensee Name License Number License Type Action

See Attachment 5.

2. Identify any major, unusual, or complex licenses issued or renewed in this period.

Amersham	**Issued as broad scope license**
Freeport McMoran	**Renewed**
Mary Bird Perkins Cancer Center	**Renewed**
McNeese State University	**Renewed**
RADS, S.L.	**Renewed**
SPEC	**Renewed**
Southern University	**Renewed**
Syncor	**Renewed**
Tulane University	**Renewed**

3. Have any new or amended licenses affected the list of licensees requiring contingency plans?

No.

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

None.

B. Adequacy of Product Evaluations (Category I)

NRC Guidelines: RCP evaluations of manufacturer's or distributor's data on sealed sources and devices outlined in NRC, State, or appropriate ANSI Guides, should be sufficient to assure integrity and safety for users. The RCP should review manufacturer's information on labels and brochures relating to radiation health and safety, assay, and calibration procedures for adequacy. Approval documents for sealed source or device designs should be clear, complete and accurate as to isotopes, forms, quantities, uses, drawing identifications, and permissive or restrictive conditions.

Questions:

1. Prepare a table listing new and revised SS&D registrations of sealed sources and devices issued during the reporting period. The table heading should be:

SS&D Registry Number	Manufacturer, Distributor or Custom User	Type of Device or Source	Indicate if NARM	Indicate if Agreement Material
LA-0760-S-102-S	**Omnitron Int'l**	**Brachytherapy Source**		**X**

2. List the applications for SS&D registrations for which registry documents have not yet been issued.

An application for a new sealed source has been received from Omnitron, but has not yet been issued.

C. Licensing Procedures (Category II)

NRC Guidelines: The RCP should have internal licensing guides, checklists, and policy memoranda consistent with current NRC practice. License applicants (including applicants for renewals) should be furnished copies of applicable guides and regulatory positions. The present compliance status of licensees should be considered in licensing actions. Under the NRC Exchange-of-Information program, evaluation sheets, service licenses, and licenses authorizing distribution to general licensees and persons exempt from licensing should be submitted to NRC on a timely basis. Standard license conditions comparable with current NRC standard license conditions should be used to expedite and provide uniformity in the licensing process. Files should be maintained in an orderly fashion to allow fast, accurate retrieval of information and documentation of discussions and visits.

Questions:

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

Licensing guides for Moisture/Density gauges, Industrial gauges, and in vitro uses have been revised, and the Medical Licensing guide is under revision.

VI. COMPLIANCE

A. Status of Inspection Program (Category I)

NRC Guidelines: The State RCP should maintain an inspection program adequate to assess licensee compliance with State regulations and license conditions. The RCP should maintain statistics which are adequate to permit Program Management to assess the status of the inspection program on a periodic basis. Information showing the number of inspections conducted, the number overdue, the length of time overdue and the priority categories should be readily available. There should be at least semiannual inspection planning for the number of inspections to be performed, assignments to senior versus. junior staff, assignments to regions, identification of special needs and periodic status reports. When backlogs occur the program should develop and implement a plan to reduce the backlog. The plan should identify priorities for inspections and establish target dates and milestones for assessing progress.

Questions:

1. Prepare a table identifying the Priority 1, 2, and 3 licenses with inspections that are overdue by more than 50% of their scheduled frequency. Include the licensee name, inspection priority, the due date, and the number of months the inspection is overdue. The list should include initial inspections that are overdue. The table heading should be:

Licensee Name	Insp. Freq. (Years)	Due Date	Months O/D

None.

2. Describe your action plan for completing your overdue inspections. If there is a backlog of

   (1) inspections with an inspection frequency of 3 years or less that are overdue by more than 50% of thier scheduled frequency , or

   (2) inspections with lower inspection frequencies that are overdue by more than 100% of thier scheduled frequency,

   please include with the questionnaire a written action plan for eliminating the backlog.

   The written action plan should contain inspection priorities, numerical and time frame goals for reducing the backlog, provide a method to measure the program's progress, and provide for management review of the program's success in meeting the goals.

None needed; no backlog.

3. How many on-site close-out inspections prior to license termination were made during the reporting period?

5.

4. How many on-site close-out inspections are pending at this time?

None.

5. How many reciprocity notices were received in the reporting period?

520.

6. How many reciprocity inspections were conducted?

5.

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

81.

8. What percentage is this of your total number of radiographer licensees?

$$\frac{100 \times 81}{38 \times 2} = 106\ \%$$

B. Inspection Frequency (Category I)

NRC Guidelines: The RCP should establish an inspection priority system. The specific frequency of inspections should be based upon the potential hazards of licensed operations, e.g., major processors, broad licensees, and industrial radiographers should be inspected approximately annually -- smaller or less hazardous operations may be inspected less frequently. The minimum

inspection frequency including for initial inspections should be no less than the NRC system.

Questions:

1. Identify individual licensees or groups of licensees the State is inspecting more frequently than called for in the State's inspection priority system and discuss the reason for the change.

None.

C. Inspector's Performance and Capability (Category I)

NRC Guidelines: Inspectors should be competent to evaluate health and safety problems and to determine compliance with State regulations. Inspectors must demonstrate to supervision an understanding of regulations, inspection guides, and policies prior to independently conducting inspections. The compliance supervisor (may be RCP manager) should conduct annual field evaluations of each inspector to assess performance and assure application of appropriate and consistent policies and guides.

Questions:

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

Supervisor	Inspector	License Category	Date

See Attachment 6.

2. Were all inspectors accompanied at least annually by the compliance supervisor during the reporting period? If not, explain.

Yes.

D. Responses to Incidents and Alleged Incidents (Category I)

NRC Guidelines: Inquiries should be promptly made to evaluate the need for on-site investigations. On-site investigations should be promptly made of incidents requiring reporting to the Agency in less than 30 days (10 CFR 20.403 types). For those incidents not requiring reporting to the Agency in less than 30 days, investigations should be made during the next scheduled inspection. On-site investigations should be promptly made of non-reportable incidents which may be of significant public interest and concern, e.g. transportation accidents. Investigations should include in-depth reviews of circumstances and should be completed on a high priority basis. When appropriate, investigations should include reenactments and time-study measurements (normally within a few days). Investigation (or inspection) results should be documented and enforcement action taken when appropriate. State licensees and the NRC should be notified of pertinent information about any incident which could be relevant to other licensed operations (e.g., equipment failure, improper operating procedures). Information on incidents involving failure of equipment should be provided to the agency responsible for evaluation of the device for an assessment of possible generic design deficiency. The RCP should have access to medical consultants when needed to diagnose or treat radiation

injuries. The RCP should use other technical consultants for special problems when needed.

Questions:

1. In this reporting period, did any incidents occur that involved equipment or source failure or approved operating procedures that were deficient?

Yes.

(i) An incident involving a broken drive cable connector contributed to an accident resulting in an excessive exposure to an industrial radiographer.

(ii) An incident involving a survey meter malfunction was reported by a licensee. A radiographer performed a survey with a meter which only read radiation in a horizontal position-it read zero when tilted slightly to any other position. This appeared to be an unacceptably dangerous condition.

a. How and when were other State licensees who might be affected notified?

(i) All State licensees were notified by mail of the incident and cautioned to carefully inspect all similar connectors.

(ii) Other licensees were not notified.

b. Was the NRC notified?

(i) The NRC was immediately notified by telephone and followed up in writing. NRC was asked to notify the State of Texas Bureau of Radiation Control, since the manufacturer had one customer in Longview, TX.

(ii) The NRC was immediately notified as well as the manufacturer.

2. 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.

(i) The Licensing & Registration Section was consulted, but connectors are not evaluated by LRPD. The licensee was asked to discontinue sales and manufacture of the connector (which had previously experienced failures) and also to have a failure analysis performed. The licensee complied; analysis by an independent laboratory indicated an apparent generic design defect. The connector has since been redesigned.

(ii) The NRC forwarded information to the State of Texas for evaluation. It apparently was determined that there was no generic design deficiency.

3. If the RCP utilized medical or technical consultants for an emergency during the reporting period, please describe the circumstances for each case.

None.

4. In the reporting period, were there any cases involving possible criminal wrongdoing that were looked into or are

presently undergoing review? If so, please describe the circumstances for each case.

Possible criminal wrongdoing was considered following an inspection of Interstate Testing, Inc. in West Monroe. The company permitted an unqualified individual to perform industrial radiography. The individual's training certificate indicated he had completed formal safety training; the training certificate was later determined to be falsified.

After consultation with the Legal Division, a penalty notice was issued. The individual had left the company and could not be located. Evidence indicating who actually falsified the document could not be obtained.

Interstate Testing has indicated that it is insolvent and plans to terminate its license.

E. Enforcement Procedures (Category I)

NRC Guidelines: Enforcement Procedures should be sufficient to provide a substantial deterrent to licensee noncompliance with regulatory requirements. Provisions for the levying of monetary penalties are recommended. Enforcement letters should be issued within 30 days following inspections and should employ appropriate regulatory language clearly specifying all items of noncompliance and health and safety matters identified during the inspection and referencing the appropriate regulation or license condition being violated. Enforcement letters should specify the time period for the licensee to respond indicating corrective actions and actions taken to prevent recurrence (normally 20-30 days). The inspector and compliance supervisor should review licensee responses.

Licensee responses to enforcement letters should be promptly acknowledged as to adequacy and resolution of previously unresolved items. Written procedures should exist for handling escalated enforcement cases of varying degrees. Impounding of material should be in accordance with State administrative procedures. Opportunity for hearings should be provided to assure impartial administration of the radiation control program.

Questions:

1. If during the reporting period the State issued orders, applied civil penalties, sought criminal penalties, impounded sources, or held formal enforcement hearings, identify these cases and give a brief summary of the circumstances and results for each case.

See Attachment 7.

2. Discuss changes made in the enforcement procedures during the reporting period.

The base used to calculate penalties involving licensed activities was increased from $2000 to $4000.

F. Inspection Procedures (Category II)

NRC Guidelines: Inspection guides, consistent with current NRC guidance, should be used by inspectors to assure uniform and complete inspection practices and provide technical guidance in the inspection of licensed programs. NRC Guides may be used if

properly supplemented by policy memoranda, agency interpretations, etc. Written inspection policies should be issued to establish a policy for conducting unannounced inspections, obtaining corrective action, following up and closing out previous violations, interviewing workers and observing operations, assuring exit interviews with management, and issuing appropriate notification of violations of health and safety problems. Procedures should be established for maintaining licensees compliance histories. Oral briefing of supervision or the senior inspector should be performed upon return from nonroutine inspections. For States with separate licensing and inspection staffs, procedures should be established for feedback of information to license reviewers.

Questions:

1. What changes were made to your written inspection procedures during the reporting period?

None.

G. Inspection Reports (Category II)

NRC Guidelines: Findings of inspections should be documented in a report describing the scope of inspections, substantiating all items of noncompliance and health and safety matters, describing the scope of licensees' programs, and indicating the substance of discussions with licensee management and licensee's response. Reports should uniformly and adequately document the results of inspections and identify areas of the licensee's program which should receive special attention at the next inspection. Reports should show the status of previous noncompliance and the independent physical measurements made by the inspector.

Questions:

1. What changes were made in the formats of your reports or inspection forms during this period?

None.

H. Confirmatory Measurements (Category II)

NRC Guidelines: Confirmatory measurements should be sufficient in number and type to ensure the licensee's control of materials and to validate the licensees measurements. RCP instrumentation should be adequate for surveying license operations (e.g., survey meters, air samplers, lab counting equipment for smears, identification of isotopes, etc.). RCP instrumentation should include the following types:

GM Survey Meter: 0-50 mr/hr
Ion Chamber Survey Meter: up to several R/hr
Neutron Survey Meter: Fast & Thermal
Alpha Survey Meter: 0-100,000 c/m
Air Samplers: Hi and Low Volume
Lab Counters: Detect 0.001 µc/wipe
Velometers
Smoke Tubes
Lapel Air Samplers
Thin Crystal

Instrument calibration services or facilities should be readily available and appropriate for instrumentation used. Licensee equipment and facilities should not be used unless under a

service contract. Exceptions for other State Agencies, e.g., a State University, may be made. Agency instruments should be calibrated at intervals not greater than that required to licensees being inspected.

Questions:

1. Describe any changes in your instrumentation or methods of calibration in this reporting period.

None.

VII. STATUS OF PREVIOUS NRC COMMENTS AND RECOMMENDATIONS

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

See attachment 8.

VIII. SPECIAL TOPICS OF CURRENT INTEREST

A. If you like, describe your program's successes, problems or difficulties that occurred during this reporting period.

PART II
PROGRAM STATISTICS

1. How many specific licenses are currently in effect? **542**

2. During the reporting period,

   a. how many new licenses were issued? **60**

   b. how many licenses were terminated? **32**

   c. how many licenses were renewed? **395**

   d. how many amendments were issued? **904**

   e. how many SS&D evaluations were completed? **2**

3. How many prelicensing visits were made during this period? **2**

4. How many materials incidents, other than unfounded allegations, occurred during the review period? **24**

5. How many on-site investigations of incidents were conducted during the period? **16**

6. How many incidents required NRC notification, either by telephone or by written report? **15**

7. How many of the incidents required Abnormal Occurrence Reports? **1**

8. How many misadministrations occurred during the reporting period? **1**

9. How many civil penalties were imposed during the reporting period? **15**

10. How many orders were issued during the reporting period? **28**

11. How many technical FTE's (not including administrative, clerical or unfilled vacancies) are currently assigned to the:

    Radioactive materials program? **6.05**

    Low-Level waste program? **0.20**

    Uranium mills program? **0.00**

12. Compute the professional/technical person-year effort of person-years per 100 licenses (excluding management above the direct RAM supervisor, vacancies and personnel assigned to mills and burial site licenses). Count only time dedicated to radioactive materials.

    6.05÷542/100 = 1.1

13. List the RCP salary schedule as follows:

Position Title	Annual Salary Range
Environmental Quality Division Administrator	**43,400-67,800**
Radiation Protection Assistant Administrator	**37,900-59,200**
Radiation Protection Program Manager	**33,100-51,700**
Radiation Protection Coordinator	**27,000-42,200**
Radiation Protection Specialist 2	**23,600-36,900**
Radiation Protection Specialist 1	**22,100-34,400**
Radiation Protection Specialist Entry	**20,600-32,200**

14. Please complete the following table using the license categories as shown, and including the total number of specific licenses in each category, the priority or inspection frequency, the number of inspections made during the review period, and the number of overdue inspections in each category. (In Priorities 1-3, include those overdue by more than 50% of their scheduled inspection frequency; in lower priorities, include those overdue by more than 100% of their scheduled frequency.)

License Category	No. of Licenses	Insp. Freq. (years)	No. Insps. Made	No. Overdue Insps.
Broad A Academic (Medical)	2	1	4	0
Broad A Industrial				
Broad A Medical				
Broad A Mfg. & Dist.	1	1	4	0
Industrial Radiography	44	1	162	0
Irradiator - Pool or Large				
LLW Broker or Service - Processing, Incineration, Repackaging				
LLW Disposal & Burial				
Nuclear Pharmacy	9	1	7	0
Source Material Processing	2	-	-	-
Teletherapy (Human Use)	6	1	7	0
U-Mill Operation				
Other Priority 1				
Broad A Academic (Non-Medical)	6	1	12	0
Broad B Academic	6	-	-	-
Broad A R & D				
Decontamination Services				
LLW Disposal Service (pre-packaged)				
Mobile Nuclear Services	2	3	2	0
SNM (unsealed)				
Other Priority 2				
Broad B Industrial	2	1	2	0
Broad B Mfg. & Dist.				
Broad B R & D				
In vitro Distribution				
Irradiators, Self-Contained, Small				
Leak Test & Calibration Services	18	4	6	0
Medical Product Distribution				
Medical, Institutional (Hospitals & Clinics)	85	3	91	0
Nuclear Laundry				
Source Material, Rare Earth				
U-Mill Tailings				
Well Logging, Field Flooding	29	3	27	0
Other Priority 3				
GL Distribution				
Lixiscopes, BMA, Sr Eye Applicator	12	4	8	0
Medical, Private Practice Limited Diagnostic or Therapy	28	-	-	-
Portable Gauge	56	4	29	0
Services - Teletherapy, Gauge, or Irradiator	17	-	-	-
Other Priority 4				
Broad C Academic				
Broad C Industrial				
Broad C Mfg. & Dist.				
Broad C R & D				

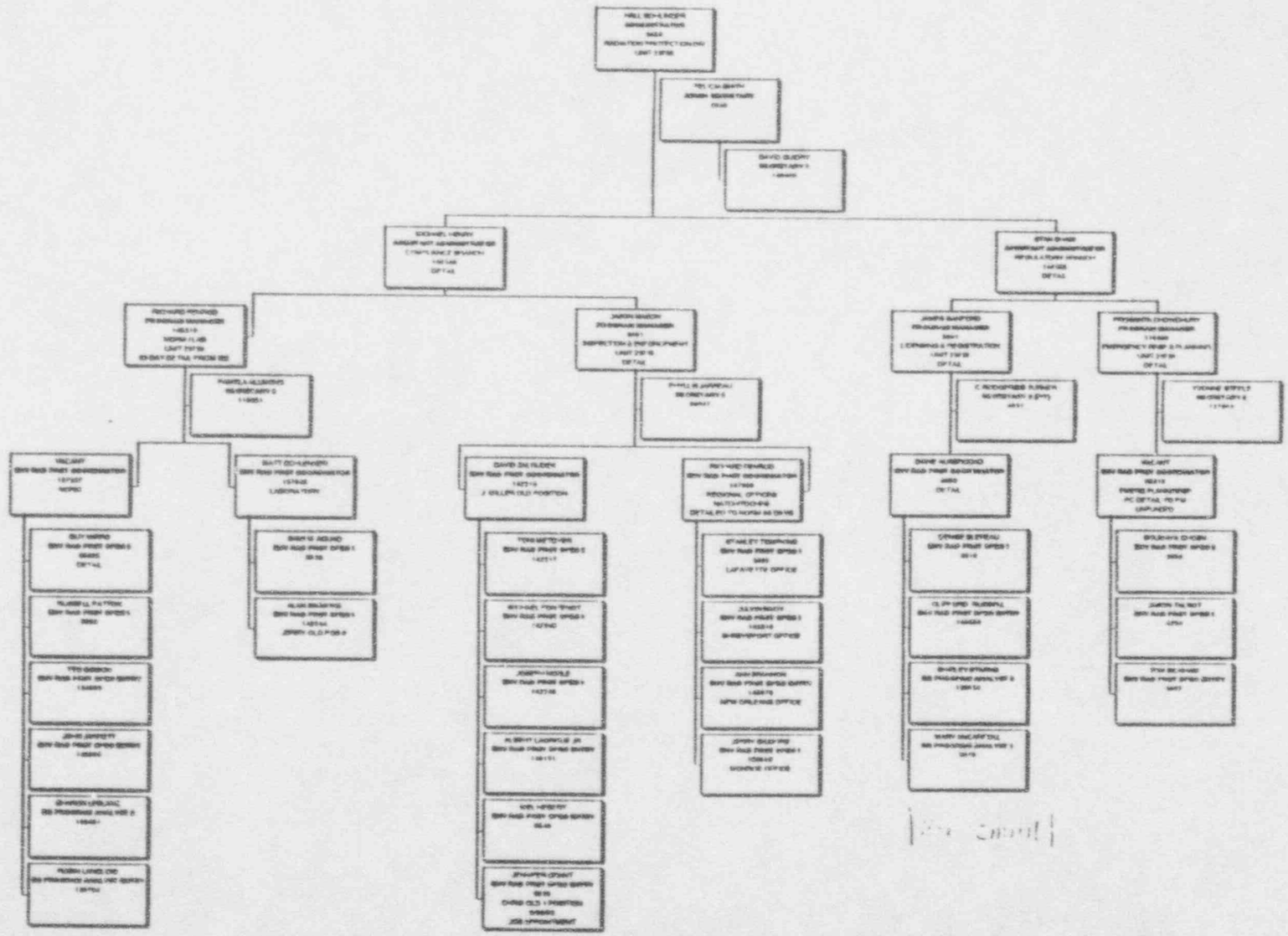
Fixed Gauge	104	4	52	0
In vitro Labs	27	7	9	0
SNM (sealed)				
Veterinary Medicine				
Other Priority 5				
Gas Chromatographs & other Measuring Systems	33	7	19	0
Leak Test Only				
Shielding, Depleted Uranium				
Other Priority 6 and 7				
TOTAL	489	-----	441	0

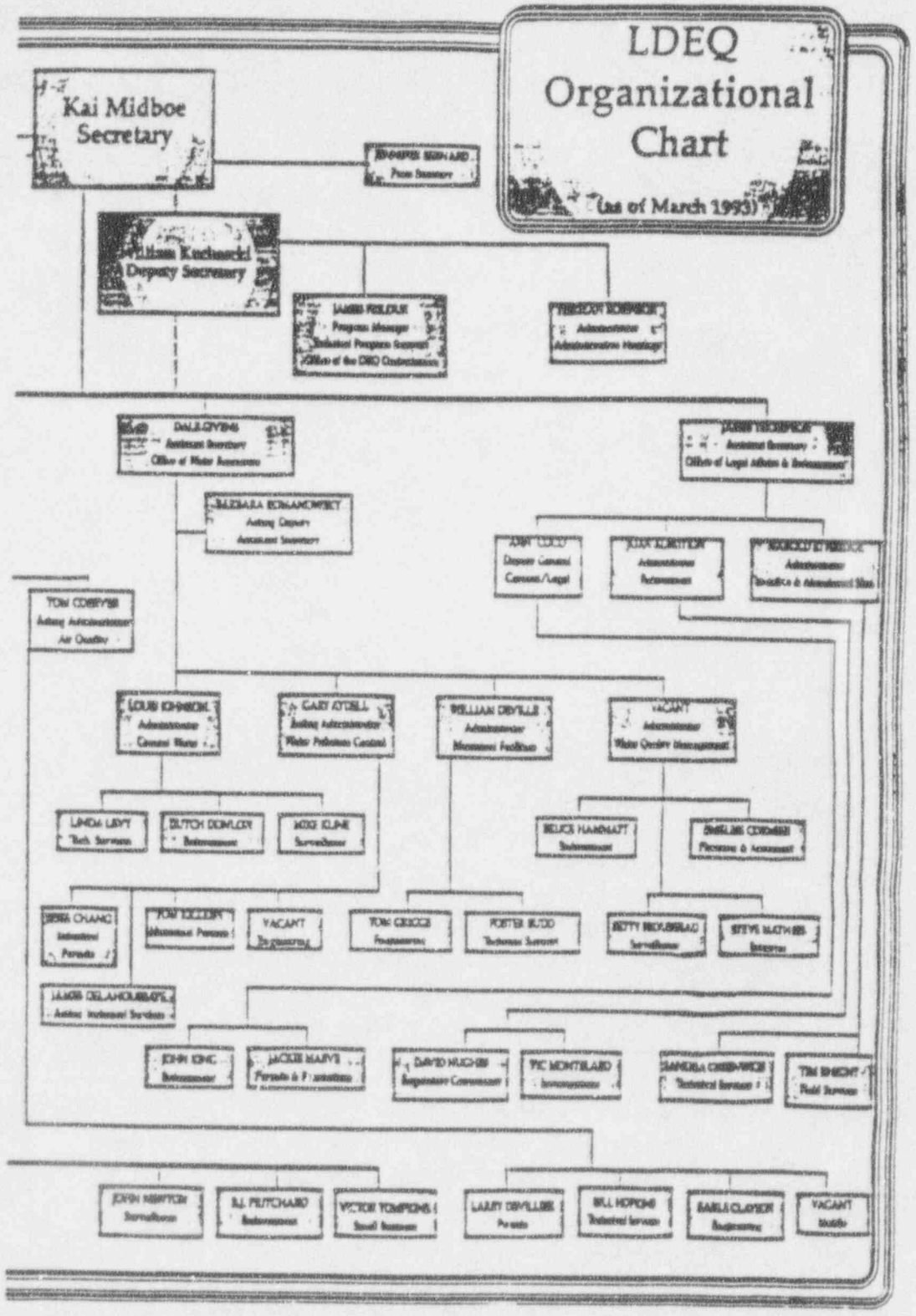
APPENDIX B

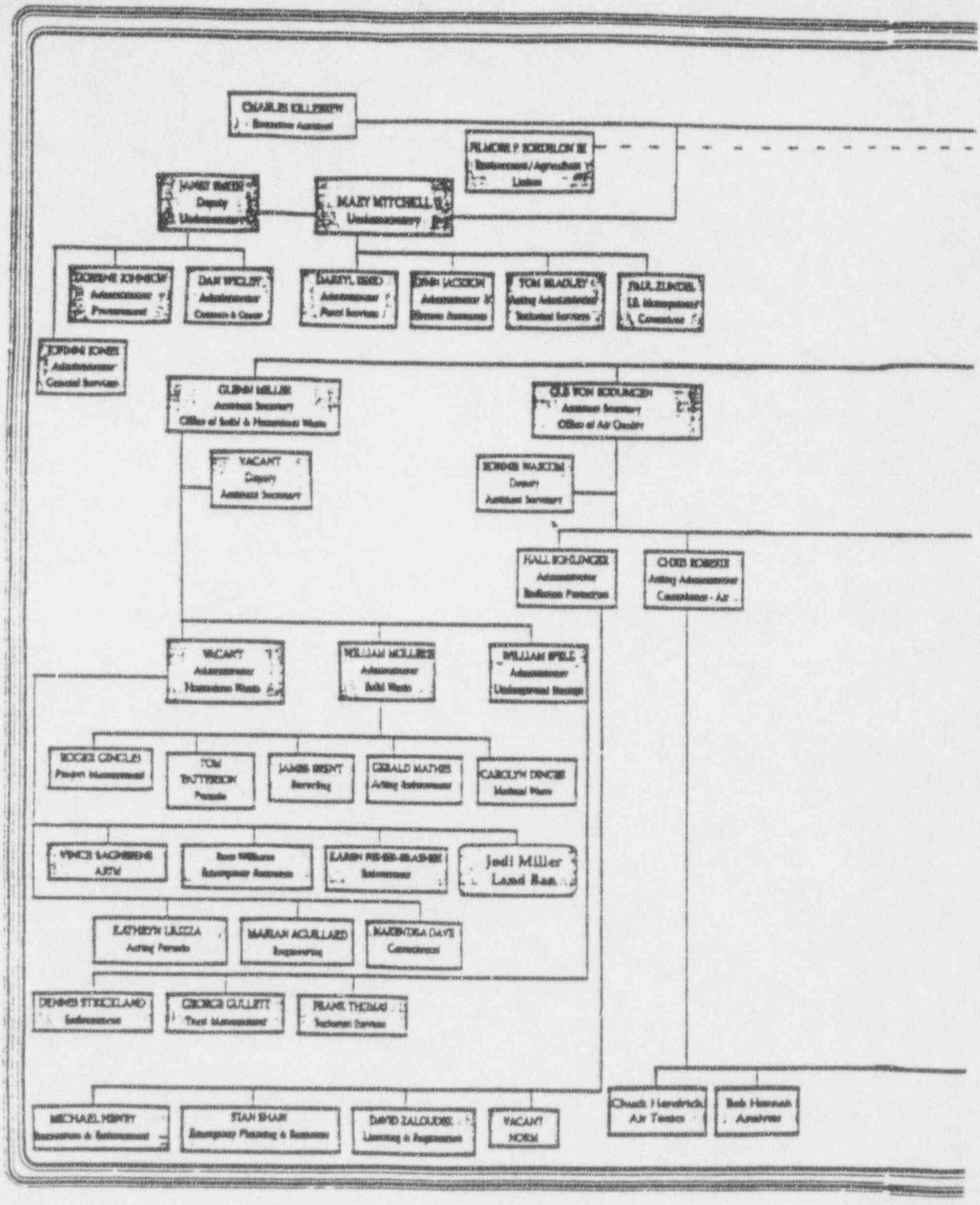
LOUISIANA STATE GOVERNMENT

DEPARTMENT OF ENVIRONMENTAL QUALITY
RADIATION PROTECTION DIVISION

Appendix B




LDEQ
Organizational
Chart
(as of March 1993)
Kai Midboe
Secretary
William Kucharski
Deputy Secretary


CHARLES KELLEHER
Executive Assistant
FILMORE P. BORDELON III
Environment/Agriculture Liaison
JANET HALES
Deputy Undersecretary
MARY MITCHELL
Undersecretary
JOSEPH JOHNSON
Administrator Procurement
DAN WELSH
Administrator Contracts & Grants
DARRYL HMED
Administrator Fiscal Services
JOHN JACKSON
Administrator Wireless Assistance
TOM BRADLEY
Acting Administrator Technical Services
PAUL FLINDEL
LA Management Committee
JORDAN JONES
Administrator General Services
GLORIA MILLER
Assistant Secretary Office of Solid & Hazardous Waste
VACANT
Deputy Assistant Secretary
GLENN KOLMAN
Assistant Secretary Office of Air Quality
JORDAN WARREN
Deputy Assistant Secretary
HALL KOHLENBERGER
Administrator Enforcement Prosecution
CHRIS ROMERO
Acting Administrator Compliance - Air
VACANT
Administrator Hazardous Waste
WILLIAM MCILWEE
Administrator Solid Waste
WILLIAM SPELL
Administrator Underground Storage
ROGER CIRCUS
Program Management
TOM BUTTERTON
Permits
JAMES BRENT
Surveying
GERALD MATHIS
Acting Administrator
CAROLYN DENCH
Medical Waste
VINCE MAGHERINI
ARTW
Jodi Miller
Land Ban
KATHRYN LUCIA
Acting Permits
MARIAN ACUILLARD
Engineering
MANDIRA DAVE
Corrections
DENNIS STRICKLAND
Enforcement
GEORGE GULLETT
Trust Management
FRANK THOMAS
Technical Services
MICHAEL MINTY
Restoration & Enforcement
TIAN SHAH
Emergency Planning & Response
DAVID ZALOUDEK
Licensing & Registration
VACANT
NORM
Chuck Hendrick
Air Toxics
Bob Hannah
Analyst

APPENDIX C

LICENSE FILE REVIEW

1. Licensee: Turo Infirmary
   Location: New Orleans, LA
   License Number: LA-1198-L01
   License Type: Medical Institution

2. Licensee: Halliburton Logging Services, Inc.
   Location: Houston, TX
   License Number: LA-2353-L01
   License Type: Well Logging

3. Licensee: Baton Rouge Central Pharmacy
   Location: Baton Rouge, LA
   License Number: LA-5394-L01
   License Type: Nuclear Pharmacy

4. Licensee: MPI Pharmacy Services, Inc.
   Location: Jefferson, LA
   License Number: LA-5470-L01
   License Type: Nuclear Pharmacy

5. Licens .: Mobile-Lab, Inc.
   Location: Harvey, LA
   License Number: LA-1898-L01
   License Type: Radiography

6. Licensee: X-Ray Inspection, Inc.
   Location: Lafayette, LA
   License Number: LA-2918-L01
   License Type: Radiography

7. Licensee: International Testing and Inspection
   Location: Belle Chasse, LA
   License Number: LA-3120-L01
   License Type: Radiography

8. Licensee: West Calcasieu-Cameron Hospital
   Location: Sulphur, LA
   License Number: LA-0603-L01
   License Type: Medical Institution

9. Licensee: Anadrill/Schlumberger
   Location: Sugar Land, TX
   License Number: LA-5642-L01
   License Type: Well Logging

10. Licensee: Harbert Construction
    Location: Birmingham, AL
    License Number: LA-5312-L01
    License Type: Gauge

11. Licensee: Herbert E. Kaufman, M.D.
Location: New Orleans, LA
License Number: LA-3550-L01
License Type: Private Practice

	COMMENTS	FILE NO.
1.	Excessive activity authorized on license	4
2.	Error on original license	3
3.	No numerical values on closeout survey	6

APPENDIX D

COMPLIANCE FILE REVIEW

1. Licensee: X-Ray Inspection, Inc.
   Location: Lafayette, LA
   License No: LA-2918-L01
   License Type: Radiographer
   Inspection Date: February 15, 1993
   Inspection Type: Unannounced, Field
   Inspector: L. Young

2. Licensee: Omnitron International
   Location: Lake Charles, LA
   License No: LA-6430-L01
   License Type: HDR Afterloader
   Inspection Date: April 12, 1993
   Inspection Type: Initial, Announced
   Inspector: L. Young

3. Licensee: Omnitron International
   Location: Lake Charles, LA
   License No: LA-6430-L01
   License Type: HDR Afterloader
   Inspection Date: December 23, 1992 (FDA accompaniment only)
   Inspection Type: Accompaniment
   Inspector: J. Sanford, L. Young

4. Licensee: International Testing & Inspection Services, Inc.
   Location: Belle Chasse, LA
   License No: LA-3120-L01
   License Type: Radiography
   Inspection Date: February 17, 1993
   Inspection Type: Routine, Announced
   Inspector: L. Young

5. Licensee: Mobile-Lab, Inc.
   Location: Harvey, LA
   License No: LA-1888-L01
   License Type: Radiography
   Inspection Date: August 4, 1992
   Inspection Type: Routine, Announced
   Inspector: L. Young

6. Licensee: Source Production and Equipment Co.
   Location: Kanner, LA
   License No: LA-2966-L01
   License Type: Manufacturer
   Inspection Date: 1992 and 1993 missing
   Inspection Type: Routine
   Inspector: L. Young

	COMMENTS	FILE NO.
1.	License was overdue for inspection.	2
2.	Documents filed out of order or missing from file.	2, 4, 6
3.	Initial inspection overdue.	2

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

November 5, 1992

MEMORANDUM TO: Vandy L. Miller, Assistant Director
State Agreements Program
Office of State Programs

THROUGH: Cardelia H. Maupin
Senior Project Manager
State Agreements Program

FROM: Richard L. Blanton

SUBJECT: Louisiana Review Visit

Visit Dates: October 5 - 7, 1992

Last Review Date: August 19 - 23, 1991

Next Review Date: To Be Scheduled, October 1993

Scope of Visit

A routine review visit of the Radiation Protection Division (RPD), Louisiana Department of Environmental Quality (DEQ), was conducted in the RPD Baton Rouge offices. The visit included discussions of the status of the overall radiation control program and the RPD current budget, staffing and operations for agreement materials. The visit also included a review of selected files on incidents, licensing actions and compliance actions since the last review.

The state was represented by Hall Bohlinger, Administrator of the Radiation Protection Division. Discussions were held with David Zaloudek, Licensing and Registration Program Manager; Michael Henry, Inspection and Enforcement Program Manager; and Stan Shaw, Emergency Response and Planning Program Manager; and with technical staff members Jason Mason, Richard Penrod, Diane Zeigler and Prosanta Chowdhury.

At the conclusion of the visit, an exit meeting was held with Dr. Bohlinger and Gustave von Bodungen, the Assistant Secretary of DEQ and the Director of the Office of Air Quality and Radiation Protection.

Status of Previous Review Comments and Recommendations

During the last regular review, the RPD program for agreement materials was found to be adequate to protect public health and safety, but a finding of compatibility was withheld because the RPD had not adopted three regulatory amendments: financial assurance for decommissioning, safety requirements for well logging and the definition of "medical misadministration." These rules have subsequently been adopted and became effective as of January 20, 1992.

In addition, two minor comments were generated. It was recommended that the RPD revise its inspection frequency policy to include in-vitro licensees at intervals of not more than five years, and that a minor backlog of inspections be eliminated. Both recommended actions have been completed.

Current Observations and Suggestions

1. Regulations

In follow-up to the findings of an NRC inspection of a Louisiana radiography licensee working under reciprocity, it was discovered that the RPD has never adopted a rule with the provisions of 10 CFR 34.33(c). The NRC rule was adopted in 1980 and requires an annual check of the response of pocket dosimeters. The RPD did adopt the other amendments due at that time. From the information currently available, it is not clear if this rule was purposefully omitted or simply overlooked.

The RPD is now working on the revision to the Part 20 equivalent rules, and is following a schedule for adoption before January 1, 1994. Staff committed to attempting to incorporate the adoption of the Part 34 rule into this rulemaking.

2. Licensing

It was noted during the file review that although the licensing program uses a guide for evaluating applications, no worksheet, checksheet or other documentation of the review is kept in the file. In the files reviewed, no letters for more information or records of telephone conversations were observed. Discussions with the licensing staff disclosed that these items are not routinely saved as part of the license file. It was suggested that the program consider whether the documents currently saved in the files form a legally sufficient record of licensing decisions, and to add such documentation (i.e., checklists, memos) as may be needed.

3. Budget

The RPD was authorized an FY93 budget of approximately $2.5 million. The budget has since been cut by $131,000 and another cut of about the same amount is anticipated. The RPD is self supporting from fees for its internal programs, but receives general tax funds to cover services provided by other agencies, such as legal services. It is these funds which are being cut. Depending on the economy and demands of other state programs, the total cuts could reach $500,000.

The RPD has implemented a major fee increase of approximately 33% overall since the last review, and does not believe any additional increase could be adopted in the near future. To prepare for the budget cuts, four staff vacancies have been left unfilled. If the funding shortfall is not as large as has been projected, the RPD will fill the vacancies as soon as possible.

4. Staffing

At present, there is a low staff turnover rate. The only technical staff departures since the 1991 review were the program director and the inspection coordinator who took positions in other divisions of DEQ. Staff vacancies exist in the X-ray, NORM and Emergency Planning programs, however the materials program is currently fully staffed.

Since the last review, the RPD has undergone a program reorganization and implemented regionalization of the inspection program. A draft organizational chart is enclosed.

5. Enforcement procedures

As a result of an amendment to the state's Administrative Procedures Act, a change may be required in the sequence of the actions taken in enforcement procedures. The RPD believes that in the future an enforcement conference with licensee management will be required prior to issuing any notice of violation. Currently, conferences are held in many, but not all, cases and after the notice is issued. The change could impact the program by increasing the staff time and effort required to complete enforcement actions, but it is not clear at this point how many FTE might be required. The change is still in the "proposed" stage.

The RPD is authorized by law to levy civil penalties up to $50,000 per day. The enforcement program uses a nine item assessment form (copy enclosed) to determine the actual amount of the penalty, working from a base of $4000. This base has recently been raised from $2000.

6. Inspection procedures

The home office of a Louisiana licensed industrial radiography company, Eagle Inspection and Testing, was inspected by NRC after a job in Wyoming. The company also possessed an NRC license, # 17-26831-01. During the NRC inspection it was noted that a previous inspection by the RPD did not cite the licensee for (1) failure to have a QA program for the type B packages, (2) failure to retain documentation of the type B package tests and (3) failure to retain documentation of the source special form tests. Region IV requested a follow-up during the visit.

The RPD has adopted the Quality Assurance Requirements (section 1521) and the requirement that licensees follow USDOT requirements when shipping radioactive materials (section 1506) from the Suggested State Regulations, Part T. These rules are in sections 1521 and 1506, respectively, of the RPD rules. Discussion with the inspection and enforcement program manager disclosed that these requirements are normally not inspected by RPD staff. The inspection program, however, is uncertain of its authority in the area of transportation rules, and is unsure that its inspectors are adequately trained

7. Incidents

A selection of incident files was reviewed, including the investigation of the receipt of radioactive waste by Rollins Environmental Services from US Department of Energy plants. Copies of the investigation report, compliance order and penalty notice are enclosed. The staff believes that it has been adequately demonstrated that no hazard exists. Although the incident continues to attract publicity, the RPD feels that there will be no further significant impact on their activities.

The only significant incident reported since the last review was the finding of an unloaded industrial radiography camera in a scrap recycling facility. The camera was traced to a licensee, who claimed it had been stolen. It was noted that this licensee is also involved in an enforcement action after a field inspection observed that a radiographer did not appear to understand his duties.

A follow-up office inspection produced evidence of a possible fraudulent certification of training. Although the fraud charge may be too difficult to prove, escalated enforcement action in the form of a $4000 civil penalty is proceeding against the licensee on other violations. The RPD is concerned that this licensee is in a marginal financial condition and may go bankrupt. The licensee has acquired a number of IR cameras which the division fears may be abandoned (see also below).

8. Concerns

The incident described above involving the IR camera has sensitized RPD staff to a potentially larger issue, that is, what will happen to IR devices that do not conform to the new safety requirements after use of those devices is prohibited on January 1, 1996? The staff fears that a number of licensees may find themselves in a situation of possessing devices which they will be unable to use and unable to afford the cost of properly disposing. This may result in a significant number of devices being abandoned by companies declaring bankruptcy.

Conclusions

The Radiation Protection Division has adopted regulations compatible with those of NRC except for one subsection of Part 34, a compatibility division II rule, which apparently was overlooked during the rulemaking in 1983. The RPD is now working on the revision to the Part 20 equivalent rules, and is following a schedule for adoption before January 1, 1994. Staff committed to attempting to incorporate the adoption of the Part 34 rule into this rulemaking. The RPD should place a high priority on these commitments.

The licensing files need to be enhanced by the use of checksheets, memos or other documentation of licensing reviews and decisions. The inspection of licensees who transport radioactive materials needs to include procedures based on Regulatory Guide 7.10, a copy of which should be sent to the RPD.

The current budget appears to be adequate despite recent reductions and forced vacancies. There are no significant backlogs of inspections or licensing actions. Staff turnover is low and the incident response functions of the RPD do not appear to have been adversely affected. However, future reductions, which are considered likely, may change this situation.

The next review should check on the resolution of the above issues. The concern of the RPD in regard to the disposal or abandonment of Industrial Radiography cameras that do not meet the new safety requirements should be addressed by NRC.

Richard L. Blanton

Richard L. Blanton, Health Physicist
State Agreements
Office of State Programs

Enclosures:
1. Licensing File Review
2. Compliance File Review
3. Draft Organizational Chart
4. Penalty Assessment Form
5. Investigation Report, Rollins Environmental Services
6. Compliance Order, Rollins
7. Penalty Order, Rollins

cc with enclosures:
Robert Doda, RSAO Region IV
State File

cc without enclosures:
Hall Bohlinger, Administrator RPD
Gustave von Bodungen, DEQ Assistant Secretary

The current budget appears to be adequate despite recent reductions and forced vacancies. There are no significant backlogs of inspections or licensing actions. Staff turnover is low and the incident response functions of the RPD do not appear to have been adversely affected. However, future reductions, which are considered likely, may change this situation.

The next review should check on the resolution of the above issues. The concern of the RPD in regard to the disposal or abandonment of Industrial Radiography cameras that do not meet the new safety requirements should be addressed by NRC.

Richard L. Blanton, Health Physicist
State Agreements
Office of State Programs

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7. Penalty Order, Rollins

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cc without enclosures:
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Gustave von Bodungen, DEQ Assistant Secretary

OFC	SP:SA	SP:SA:SPM	SP:SA:AD	SP:D			
NME	RBlanton:	CMaupin	VMiller	CKammerer			
DTE	11/05/92	11/5/92	11/ /92	11/ /92			

G:\LA92VIST.RLB

LICENSE FILE REVIEW

File number:	1	License Reviewer:	Diane Zeigler
Licensee:	Eagle International Testing Company		
License Type:	Industrial Radiography		
License Number:	LA-5857-L01	Location:	Boutle, LA
Amendment Number:	4	Amendment for:	Renewal
Amendment Date:	12/20/91	Expiration Date:	12/31/93

File number:	2	License Reviewer:	Diane Zeigler
Licensee:	Rollins Environmental Services (LA), Inc.		
License Type:	Gas Chromatography		
License Number:	LA-4173-L01	Location:	Baton Rouge
Amendment Number:	5	Amendment for:	Renewal
Amendment Date:	9/25/92	Expiration Date:	9/30/96

File number:	3	License Reviewer:	Diane Zeigler
Licensee:	Interstate Testing, Inc.		
License Type:	Industrial Radiography		
License Number:	LA-6217-L01	Location:	West Monroe, LA
Amendment Number:	5	Amendment for:	Renewal
Amendment Date:	10/22/92	Expiration Date:	11/30/93

File number:	4	License Reviewer:	Diane Zeigler
Licensee:	Owensby & Kritikos, Inc.		
License Type:	Industrial Radiography		
License Number:	LA-2234-L01	Location:	Gretna, LA
Amendment Number:	45	Amendment for:	
Amendment Date:	2/23/92	Expiration Date:	2/28/94

File number:	5	License Reviewer:	J W Sanford
Licensee:	St. Jude Medical Center		
License Type:	Nuclear Medicine		
License Number:	LA-5162-L01	Location:	Kenner, LA
Amendment Number:	5	Amendment for:	Renewal
Amendment Date:	6/18/92	Expiration Date:	7/31/95

File number:	6	License Reviewer:	Diane Zeigler
Licensee:	Byrd Memorial Hospital		
License Type:	Nuclear Medicine		
License Number:	LA-1431-L01	Location:	Leesville, LA
Amendment Number:	3	Amendment for:	Renewal
Amendment Date:	9/24/92	Expiration Date:	11/30/95

File number:	7	License Reviewer:	J W Sanford
Licensee:	Qualitech Services		
License Type:	Industrial Radiography		
License Number:	LA-6346-L01	Location:	Harvey, LA
Amendment Number:	4	Amendment for:	Renewal
Amendment Date:	6/11/92	Expiration Date:	8/31/92

File number:	8	License Reviewer:	J W Sanford
Licensee:	Beaird Industries, Inc.		
License Type:	Industrial Radiography		
License Number:	LA-0576-L01	Location:	Shreveport, LA
Amendment Number:	21	Amendment for:	Renewal
Amendment Date:	6/26/92	Expiration Date:	6/30/94

LICENSE FILE REVIEW COMMENTS

Comment	File #
License was renewed on letter request (full renewal reviews conducted only every 10 years)	1, 2, 3, 5, 6
Application deficiency not identified by reviewer, license needs additional license conditions	1, 3, 4, 7, 8
Licensee had poor compliance history which was not considered during renewal, or consideration was not documented	1, 2, 3
Correspondence or application attachment is misplaced or missing from file	4
Licensee changed equipment listed in application, change was noted by inspector, but license was renewed on letter request that stated "no change" to facility or equipment	5
License had expired, no renewal application in file, no indication of action taken by RPD to stop licensee activity	7
File contains no documentation of evaluation of application, renewal or amendment request	All files

COMPLIANCE FILE REVIEW

File number:	1	Inspector:	James Miller
Licensee:	Eagle International Testing Company		
License Type:	Industrial Radiography		
License Number:	LA-5857-L01	Location:	Boutle, LA
Inspection Type:	Routine	Announced:	Yes
Inspection Date:	11/14/91	IR Office/field:	Office

File number:	2	Inspector:	Multiple
Licensee:	Rollins Environmental Services (LA), Inc.		
License Type:	Gas Chromatography		
License Number:	LA-4173-L01	Location:	Baton Rouge
Inspection Type:	Investigation	Announced:	Yes
Inspection Date:	4/30-5/24/91	IR Office/field:	N/A

File number:	3	Inspector:	Multiple
Licensee:	Interstate Testing, Inc.		
License Type:	Industrial Radiography		
License Number:	LA-6217-L01	Location:	West Monroe, LA
Inspection Type:	Routine w/ fu	Announced:	No
Inspection Date:	3/30 - 4/02/92	IR Office/field:	Field

File number:	4	Inspector:	Lenny Young
Licensee:	Owensby & Kritikos, Inc.		
License Type:	Industrial Radiography		
License Number:	LA-2234-L01	Location:	Gretna, LA
Inspection Type:	Routine	Announced:	No
Inspection Date:	8/05/92	IR Office/field:	Field

File number:	5	Inspector:	Toni Metoyer
Licensee:	St. Jude Medical Center		
License Type:	Nuclear Medicine		
License Number:	LA-5162-L01	Location:	Kenner, LA
Inspection Type:	Routine	Announced:	Yes
Inspection Date:	1/16/92	IR Office/field:	N/A

File number:	6	Inspector:	Richard Penrod
Licensee:	Byrd Memorial Hospital		
License Type:	Nuclear Medicine		
License Number:	LA-1431-L01	Location:	Leesville, LA
Inspection Type:	Routine	Announced:	No
Inspection Date:	1/28/92	IR Office/field:	N/A

File number:	7	Inspector:	Lenny Young
Licensee:	Qualitech Services		
License Type:	Industrial Radiography		
License Number:	LA-6346-L01	Location:	Harvey, LA
Inspection Type:	Routine	Announced:	No
Inspection Date:	8/06/92	IR Office/field:	Field

File number:	8	Inspector:	-
Licensee:	Beaird Industries, Inc.		
License Type:	Industrial Radiography		
License Number:	LA-0576-L01	Location:	Shreveport, LA
Inspection Type:	Routine	Announced:	No
Inspection Date:	7/21/92	IR Office/field:	Field

COMPLIANCE FILE REVIEW COMMENTS

Comment	File #
Review of some licensee program elements not documented	1, 3, 5, 6, 7
Substance of exit discussions not documented	1, 5, 6, 7
Interviews with ancillary workers not documented	5, 6
Independent measurements or swipes by inspector not taken or not documented	4
Enforcement letter delayed (mailed > 30 days)	5
Inspector noted significant change in licensee equipment, but finding was not effectively communicated to the licensing staff	5

PENALTY ASSESSMENT FORM
RADIATION PROTECTION DIVISION

Respondent: Date:

The following items were considered in proposing a penalty in accordance with R.S. 30:2025(E).

1. Compliance History

No previous violations Previous penalty

No repeat violations Compliance Order

Repeat violations

2. Nature and Gravity of Violation

No exposures involved Release of material

Potential for serious exposure

Exposures involved

3. Degree of Culpability

Cooperative Willful violation

Partially cooperative

Noncooperative

4. Reporting

As per regulation

Improper reporting

No reports

PENALTY ASSESSMENT FORM (CONTINUED)

5. Monetary Benefits from Noncompliance

Comments:

7. Size of Company

Comments

8. Enforcement Cost

Comments:

9. Length of Noncompliance if Applicable

Comments:

After careful consideration of all the above stated factors, the Radiation Protection Division recommends that _____ be assessed a penalty in the amount of $_____.

State of Louisiana

Department of Environmental Quality

BUDDY ROEMER
Governor

PAUL TEMPLET
Secretary

August 5, 1991

CERTIFIED RETURN RECEIPT REQUESTED

P 174 466 594
P 174 466 595

Rollins Environmental Services (LA), Inc.
(LAD010395127) (LA-4173-L01)
Post Office Box 74137
Baton Rouge, Louisiana 70807
ATTN: Mr. George B. Martin

Subject: COMPLIANCE ORDER
HE-C-91-0341

Dear Mr. Martin:

Attached please find a Compliance Order issued to Rollins Environmental Services (LA), Inc. by the Louisiana Department of Environmental Quality.

In order to reduce document handling time, please refer to the docket number on the top right of the attached document on all correspondence in response to this action.

If you have any questions regarding this matter, please do not hesitate to contact this office at 504/765-0355.

Sincerely,

Timothy W Hardy

TIMOTHY W. HARDY
Assistant Secretary

Mike D. McDaniel

MIKE D. MCDANIEL, PH.D.
Assistant Secretary

TWH:THP:aw

Attachments

STATE OF LOUISIANA

DEPARTMENT OF ENVIRONMENTAL QUALITY

OFFICE OF SOLID AND HAZARDOUS WASTE

HAZARDOUS WASTE DIVISION

IN THE MATTER OF:	
ROLLINS ENVIRONMENTAL SERVICES (LA), INC. (LAD010395127) (LA-4173-L01) CLEAMONS WILLIAM ROAD EAST BATON ROUGE PARISH BATON ROUGE, LOUISIANA	
	COMPLIANCE ORDER DOCKET NO. HE-C-91-0341
PROCEEDINGS UNDER THE LOUISIANA ENVIRONMENTAL QUALITY ACT LA. R.S. 30:2001 ET SEQ.	

The following COMPLIANCE ORDER is issued to ROLLINS ENVIRONMENTAL SERVICES (LA), INC. (Respondent) by the Louisiana Department of Environmental Quality (the Department), under the authority granted by the Louisiana Environmental Quality Act (the Act), La. R.S. 30:2001 et seq. and particularly by La. R.S. 30:2025 (C).

FINDINGS OF FACT

I.

Respondent operates a hazardous waste treatment, storage, and disposal facility located on Cleamons William Road, Baton Rouge, East Baton Rouge Parish, Louisiana.

II.

Respondent also holds Louisiana License No. LA-4173-L01 issued by the Department's Radiation Protection Division.

III.

Between April 30 and May 24, 1991, an investigation was conducted by the Department's Radiation Protection Division to determine Respondent's compliance status. During the investigation, it was determined that:

A. Contrary to LAC 33:XV.301.A., Respondent received radioactive material without specific authorization.

B. Contrary to LAC 33:XV.434., Respondent disposed of radioactive material without prior approval from the Secretary.

C. Contrary to LAC 33:XV.435., Respondent incinerated radioactive material without prior approval from the Secretary.

D. Contrary to LAC 33:XV.1410.D., the Radiation Protection Division was not notified of the location where NORM exists and causes exposure rates in excess of 50 microRoentgens per hour at accessible points. The results of the required confirmatory survey were not submitted to the Division.

E. Respondent deposited in its landfill waste materials containing uranium enriched with uranium-235 (which is a radioactive material as defined by the Radiation Protection Division),in violation of LAC 33:V.2503.J.1.n.

COMPLIANCE ORDER

Based on the foregoing **FINDINGS OF FACT**, Respondent **IS HEREBY ORDERED:**

I.

To immediately cease accepting materials classified as radioactive by the Radiation Protection Division, and to implement a program approved by the Radiation Protection Division which will prevent the receipt of radioactive materials prohibited from disposal in landfills (pursuant to LAC 33:V.2503.J.1.n).

II.

To be hereby notified that for each violation described herein, the Department hereby reserves the right to seek civil penalties in any manner allowed by law and nothing herein shall be construed to preclude the right to seek such penalties.

III.

To be hereby notified that Respondent's failure or refusal to comply with this **COMPLIANCE ORDER** and the provisions herein will subject Respondent to possible enforcement procedures under La. R.S. 30:2025 which could result in the assessment of a civil penalty in an amount not to exceed fifty thousand dollars ($50,000) for each day of continued non-compliance.

IV.

To be hereby notified that this **COMPLIANCE ORDER** shall become final and not subject to further review by the Department unless Respondent files, no later than twenty (20) days after receipt of this document, a written request for a hearing. This request

Administrative Hearing Clerk
Administrative Hearings Division
Office of the Secretary
Louisiana Department of Environmental Quality
Post Office Box 82263
Baton Rouge, Louisiana 70884-2263

and should reference the number which is located in the upper right hand corner of the first page of this document.

V.

To be hereby notified that failure to timely request a hearing constitutes a waiver of Respondent's opportunity for a hearing under the provisions of Section 2024 (A) of the Act for the violations described herein and for the provisions of this COMPLIANCE ORDER.

VI.

This COMPLIANCE ORDER is effective upon receipt.

Done at Baton Rouge, Louisiana, this 5th day of August, 1991.

Timothy W. Hardy
TIMOTHY W. HARDY
ASSISTANT SECRETARY
Department of Environmental Quality

Mike D. McDaniel
MIKE D. MCDANIEL, PH.D.
ASSISTANT SECRETARY
Department of Environmental Quality

Please serve Respondent through its agent for service of process:

United States Corporation Company
American Bank Building
New Orleans, Louisiana 70130

Copies of a request for hearing and/or related correspondence should be sent to:

Mr. Thomas H. Patterson, Program Manager
Department of Environmental Quality
Hazardous Waste Division/Enforcement Section
Post Office Box 82178
Baton Rouge, Louisiana 70884-2178

State of Louisiana

Department of Environmental Quality

BUDDY ROEMER
Governor

PAUL TEMPLET
Secretary

August 5, 1991

CERTIFIED RETURN RECEIPT REQUESTED

P 174 466 545
P 174 466 546

Rollins Environmental Services (LA), Inc.
(LAD010395127) (LA-4173-L01)
Post Office Box 74137
Baton Rouge, Louisiana 70807
ATTN: Mr. George B. Martin

Subject: **Penalty Notice**
HE-P-91-0372

Dear Mr. Martin:

Attached please find a Penalty Notice issued to Rollins Environmental Services (LA), Inc. by the Louisiana Department of Environmental Quality.

In order to reduce document handling time, please refer to the docket number on the top right of the attached document on all correspondence in response to this action.

If you have any questions regarding this matter, please do not hesitate to contact this office at 504/765-0355.

Sincerely,

Timothy W Hardy

TIMOTHY W. HARDY
Assistant Secretary

Mike D. McDaniel

MIKE D. MCDANIEL, PH.D.
Assistant Secretary

TWH:THP:aw

Attachments

STATE OF LOUISIANA

DEPARTMENT OF ENVIRONMENTAL QUALITY

OFFICE OF SOLID AND HAZARDOUS WASTE

HAZARDOUS WASTE DIVISION

IN THE MATTER OF:	*
	*
	*
ROLLINS ENVIRONMENTAL SERVICES (LA), INC.	*
(LAD010395127)(LA-4173-L01)	*
CLEAMONS WILLIAM ROAD	*
EAST BATON PARISH	*
BATON ROUGE, LOUISIANA	*
	*
	*PENALTY NOTICE
	*DOCKET NO. HE-P-92-0372
	*
PROCEEDINGS UNDER THE LOUISIANA	*
ENVIRONMENTAL QUALITY ACT	*
LA. R.S. 30:2001 ET SEQ.	*

The following PENALTY NOTICE is issued to ROLLINS ENVIRONMENTAL SERVICES (LA), INC. (Respondent) by the Louisiana Department of Environmental Quality (the Department), under the authority granted by the Louisiana Environmental Quality Act (the Act), La. R.S. 30:2001 et seq. and particularly by La. R.S. 30:2025 (E).

FINDINGS OF FACT

I.

Respondent operates a hazardous waste treatment, storage, and disposal facility located on Cleamons William Road, Baton Rouge, East Baton Rouge Parish, Louisiana.

II.

Respondent also holds Louisiana License No. LA-4173-L01 issued by the Department's Radiation Protection Division.

III.

Between April 30 and May 24, 1991, an investigation was conducted by the Department's Radiation Protection Division to determine Respondent's compliance status. During the investigation, it was determined that:

A. Contrary to LAC 33: XV. 301.A., Respondent received radioactive material without specific authorization.

B. Contrary to LAC 33: XV. 434., Respondent disposed of radioactive material without prior approval from the Secretary.

C. Contrary to LAC 33: XV. 435., Respondent incinerated radioactive material without prior approval from the Secretary.

D. Contrary to LAC 33: XV. 1410.D., the Radiation Protection Division was not notified of the location where NORM exists and causes exposure rates in excess of 50 microRoentgens per hour at accessible points. The results of the required confirmatory survey were not submitted to the Division.

E. Respondent deposited in its landfill waste materials containing uranium enriched with uranium-235 (which is a radioactive material as defined by the Radiation Protection Division), in violation of LAC 33:V.2503.J.1.n.

IV.

A civil penalty under Section 2025 (E) of the Act may be assessed for the violations described herein.

V.

Having considered the factors set forth in Section 2025 of the Act, and in light of all presently known facts and circumstances in this matter, a civil penalty in the amount of $10,000.00 would be appropriate, equitable, and justified.

ORDER

Based on the foregoing FINDINGS OF FACT, Respondent IS HEREBY ORDERED to be on notice that:

I.

A penalty in the amount of $10,000.00 is hereby assessed and shall become final and not subject to further review unless Respondent files, no later than twenty (20) days after receipt of this document, a written request for a hearing. This request should be directed to the following:

Administrative Hearings Clerk
Administrative Hearings Division
Office of the Secretary
Louisiana Department of Environmental Quality
Post Office Box 82263
Baton Rouge, Louisiana 70884-2263

and should reference the number which is located in the upper right hand corner of the first page of this document.

II.

Failure to timely request a hearing as provided in Paragraph I of this ORDER constitutes a waiver of Respondent's right to a hearing under the provisions of Section 2025 (E) of the Act for the violations described herein.

III.

Upon failure to request a hearing as provided in Paragraph I of this ORDER, the Respondent must make payment in full of the civil penalty set herein no later than fifteen (15) days after the assessment becomes final. Penalties are to be made payable to the Department of Environmental Quality, and mailed to the attention of Darryl Serio, Office of Management and Finance, Department of Environmental Quality, Post Office Box 82231, Baton Rouge, Louisiana 70884-2231.

IV.

Upon the penalty assessed herein becoming final because of Respondent's failure to timely file a request for a hearing, and upon Respondent's failure to pay the civil penalty provided herein or to make arrangements satisfactory to the Department for such payment, this matter shall be referred to the Attorney General for collection of the penalty plus all costs associated with the collection.

V.

Upon Respondent timely filing a request for a hearing, a hearing on this **PENALTY NOTICE** shall be scheduled by the Secretary of the Department of Environmental Quality. The hearing shall be governed by the Administrative Procedure Act (La.R.S. 49:950 et seq.), the Environmental Quality Act (La. R.S. 30:2001 et seq.) and the Department's Rules of Procedure. The Department may amend or supplement the **PENALTY NOTICE** prior to the hearing, after providing sufficient notice and an opportunity for the preparation of a defense for the hearing.

VI.

For each violation described herein, the Department reserves the right to seek compliance with its rules and regulations in any manner allowed by law an nothing herein shall be construed to preclude the right to seek such compliance.

VII.

This **ORDER** is effective upon receipt.

Done at Baton Rouge, Louisiana on this 5th day of August, 1991.

Timothy W. Hardy

TIMOTHY W. HARDY
ASSISTANT SECRETARY
Department of Environmental Quality

Mike D. McDaniel

MIKE D. MCDANIEL, PH.D.
ASSISTANT SECRETARY
Department of Environmental Quality

Please serve Respondent through its agent for service of process:

United States Corporation Company
American Bank Building
New Orleans, Louisiana 70130

Copies of a request for hearing and/or related correspondence should be sent to:

Mr. Thomas H. Patterson, Program Manager
Department of Environmental Quality
Hazardous Waste Division/Enforcement Section
Post Office Box 82178
Baton Rouge, Louisiana 70884-2178

INVESTIGATION REPORT

Facility: Rollins Environmental Services (LA), Inc.
Post Office Box 74137
Baton Rouge, Louisiana 70874-4137

Investigation date:
April 30 through May 14, 1991

Inspector: James D. Miller
Health Physicist

Chris Simms
Health Physicist

Report Date:
June 20, 1991

Persons Interviewed:

Edward C. Chevalier
Laboratory Manager

George Martin
President

Michael J. Higgs
Environmental
Affairs Mgr.

This investigation was initiated at the request of Mike McDaniel because of an allegation to DEQ that DOE was sending radioactive waste material to Rollins. Part of the investigation was conducted to determine if waste received at the Rollins Environmental Services facility is routinely screened for the presence of radioactive material and to verify the procedures and equipment that are used in the screening process. During the course of the inspection and investigation, certain discrepancies with the Louisiana Radiation Regulations were detected. These discrepancies are explained and the resulting violations are summarized in this report.

INSPECTION SUMMARY

A. Surveys and Sampling

On April 30, 1991, during an interview with Mr. Edward Chevalier, Rollins laboratory manager, it was learned that the facility did not have written procedures by which waste material was screened for the presence of radiation. On May 2, 1991, during an interview with Mr. Michael Higgs of Rollins, it was learned that the facility used a CDV-700 GM survey meter to screen incoming shipments of waste for the presence of radiation.

On May 30, 1991, surveys of the Rollins grounds and facility

were performed. The surveys were performed at the holding docks for containers of waste that are to be incinerated. During the survey of this area, exposure rate readings at the surfaces of waste drums were between two times and twenty times the established background exposure rate of 400 to 600 counts/minute using a Ludlum Model 3 meter with a NaI scintillation detector. The drums of waste from Digital Corp. were surveyed again using a calibrated Ludlum Model 3 and GM "pancake" probe because they exhibited exposure readings of approximately 20 times the established background with the scintillation detector. The radiation exposure rate obtained at the surface of the drums was 0.1 mR/hour or 100 µR/hour. The other drums of waste that exhibited approximately twice background readings with the scintillation detector did not exhibit any readings above the background reading of 0.02 mR/hour or 20 µR/hour using the Ludlum Model 3 with a GM "pancake" probe.

The drums showing the increased exposure readings were set aside and samples of these drums were taken on May 1, 1991. The three (3) samples were from waste streams received by Rollins from the Digital Equipment Company, San German, Puerto Rico; the Sun Refining Co., Tulsa, Oklahoma; and the Rhone-Poulenc Company, Freeport, Texas. **The laboratory analysis results are included with this report.** Concentrations of potassium 40 (Digital sample), radium 226 (Sun Refining and Rhone Poulenc samples) were indicated as causing the increased exposure rate readings.

The Digital Corporation in San German, Puerto Rico, was contacted by telephone. Their representative stated that the waste was unused potassium hydroxide reagent. The "NORM" regulations exempt materials containing the potassium 40 radionuclide if it has not been isotopically enriched in the potassium 40 radionuclide. Calculations reveal that the waste material has not been isotopically enriched in the potassium 40 radionuclide. **A copy of the calculation is included with this report.** The comparison of the natural abundance reference of 0.0117% potassium 40 in potassium and the calculated range of 0.0143% to 0.0153% appears to indicate the contrary; however, this discrepancy is due to the inherent error obtained when using the activity results obtained from gamma spectrometry to establish a comparison with a reference that may have been derived theoretically or by a different empirical analysis. Consequently, the difference does not substantiate that the potassium 40 in the waste material was isotopically enriched.

The radium 226 activity in the Sun Refining Co. waste and the Rhone-Poulenc waste was of concentrations that did not yield

exposure readings in excess of 50 microRoentgens per hour.

Additional surveys of the Rollins property grounds were performed on May 16, 1991, by Chris Simms and James Miller. A Ludlum Model 19, 'MicroR' survey meter was used and the areas surveyed were the cell #717, the Stabilization and Encapsulation Facility, Hazardous Waste Tank Farm, incinerator ash collection bins, incinerator scrubber waste water treatment and recovery plant, hazardous waste incineration holding docks and the tractor trailer receiving and docking area for trucked, incoming hazardous waste. Readings of between 4 and 18 µR/hour were obtained during the surveys of all locations, excluding the tractor trailer van receiving and docking area. The high readings (18 µR/hour) were obtained from the brick used as the roadbed within the waste cell #904 which was surveyed on April 30, 1991, and from the fly ash/portland cement mixture used at the encapsulation facility. A tractor trailer van which was located in bay #11 of the dock showed maximum readings of 25 µR/hour at the exterior surface of the van. Mr. Steve Cange opened the van and the inspectors entered the van to survey the contents. During the survey of the interior contents of the van, the inspectors wore full-faced respiratory protection. Readings of 45 and 55 µR/hour were obtained approximately one (1) centimeter from the surfaces of two different groups of drums.

Stephen Cange of Rollins was told that the drums in the tractor trailer van should be off-loaded for sampling. The drums of waste were received at Rollins from Oil Process Company (OPC), Los Angles, California.

On May 17, 1991, James Miller and Richard Brackin, assisted by Mike Higgs, Ed Lutz, Steve Cange, Glen Bordelon and Jeff Pittman of Rollins, collected samples from each of twelve (12) drums taken from the entire contents of the tractor trailer van. After these drums were sampled, two (2) additional samples were taken from the ash contents of two incinerator ash bins. **The results of the laboratory analysis of these fourteen (14) samples, dated May 17, 1991, are included with this report.** The laboratory analysis results indicated that the exposure rates in excess of 50 µR/hour were due to the presence of radium 226 within the waste received from the OPC company. Mr. Cange agreed that the drums would not be incinerated until further notice from the Division. Laboratory analysis results of the two (2) ash samples did not indicate detectable activity of radium 226.

Mr. Cange and Mr. George Martin were told that the presence of radium 226 in the waste would subject Rollins to the 'NORM' regulations. A violation was cited because contrary to LAC

33: XV, 1410.D. of the Louisiana Radiation Regulations, the Division was not notified of the location where NORM exists and causes exposure rates in excess of 50 microRoentgens per hour at accessible points; and the results of the required confirmatory survey were not submitted to the Division.

The OPC drums were again sampled on May 22, 1991 by Chris Simms and James Miller. At this sampling an auger was used to retrieve the samples from the central areas of each of eleven (11) of the twelve (12) previously sampled drums. One drum contained contaminated cloth that did not allow auger sampling. **The results of the laboratory analysis of these eleven (11) samples are included with this report.** The results again indicated the presence of radium 226.

Water sampling criteria were established with the assistance of Ms. Madeline Murphy of Water Pollution Division. Assistance with the collection of the water and leachate samples was also provided by Mr. Mike Bradley and Mr. Rick Kaiser of the same Division. Information contained within the Rollins' 1990 environmental sampling report from the Encor company was used to establish the water monitoring wells which would target existing geological areas (ground water) where other concentrations of hazardous materials have been detected. **The monitoring wells that were sampled for possible intrusion of radionuclides to groundwater are noted on the map which is enclosed with this report.**

Six (6) groundwater monitoring wells, identified as 4A, 8A, 11A, 6B, 14C and AT-11, were sampled. Additionally, four (4) samples were taken from leachate taps of three (3) different waste cells and one (1) of the four samples was from the leachate composite tank. These samples are identified by the waste cell numbers 717, 901, 904 and "leachate composite". **The laboratory analysis results for these samples are enclosed with this report.**

B. Records

On May 30, 1991, records of incoming waste streams were reviewed to establish the identity of waste streams originating from U.S. Department of Energy contract facilities. During this review, waste data sheets were obtained indicating that waste material from the DOE Y-12 plant at Oak Ridge, Tennessee, was accepted at the Baton Rouge Rollins plant. These data sheets also indicated the presence of waste contaminated with uranium enriched in uranium 235 (approximately 2.5%). Part H. of the data sheets indicated that the material was not radioactive material by regulatory compliance. A violation was cited because contrary to LAC 33:

XV. 301.A. of the Louisiana Radiation Regulations, radioactive material was received without specific authorization. Rollins' current Radioactive Material License does not authorize the receipt of special nuclear material. Further, the manifest for this waste material, designated by the waste stream "BR-16671", indicated that 364,900 pounds of this waste stream was received at the Rollins facility between April 10, 1990 and February 8, 1991. Subsequent communications of May 17, 1991, with DOE representative, Larry Radcliff, revealed that DOE records indicated that the Rollins facility received a total of 1,188,316 pounds of the waste stream which contained the uranium contaminated waste. The records indicated that, of the total uranium, the enrichment of uranium 235 in the material was up to 2.6%. The percentage of uranium 235 in natural uranium is 0.72%. Also, records indicated that this material was disposed by incineration. **Calculations showing a comparison of a 100% release (worst case scenario) of uranium 238 and uranium 235 to the atmosphere with the maximum permissible concentrations (LAC 33: XV., Chapter 4, Appendix A) are included with this report.** A violation was cited because contrary to LAC 33: XV. 435. of the Louisiana Radiation Regulations, radioactive material was incinerated without prior approval from the Secretary. Another violation was cited because contrary to LAC 33: XV. 434. of the Louisiana Radiation Regulations, radioactive material was disposed by burial without prior approval from the Secretary. The ash from the incineration of this material is put into the waste cells. **Copies of the waste data sheets are included with this report.**

Also, on May 24, 1991, copies of waste data sheets were obtained and reviewed for the following DOE contract facilities which can send waste to Rollins: Savannah River, South Carolina; U.S. NASA-Martin-Marietta, New Orleans, La.; Brookhaven National Laboratory, Upton, New York; Martin-Marietta Y-12 plant, Oak Ridge, Tennessee; Paducah Gaseous Diffusion Plant, Paducah, Kentucky and Los Alamos National Laboratory, Los Alamos, New Mexico. **Copies of these documents are included for reference with this report.** These documents, other than those for the Y-12 plant (BR-16771), did not indicate the presence of any concentration of radioactive materials.

Waste data sheets and manifests for waste materials received from Oil Process Company are also included with this report. The Oil Process Company drums containing the NORM are being held from incineration.

The U.S. Department of Energy issued a memorandum on May 17, 1991, directing that all of their contract facilities cease

shipments of materials to commercial disposal facilities not specifically licensed to receive radioactive waste materials. **A copy of this memorandum is included with this report.**

The Rollins facility now possesses scintillation survey equipment and has been directed by DEQ to develop and implement screening procedures for the detection of radioactive materials in the received waste streams.

On May 24, 1991, Rollins submitted procedures to the Division to assure that unauthorized radioactive material would not be received. The procedures are being reviewed by the licensing section for adequacy.

INSPECTION BY: James D. Miller REVIEWED BY: Jason R. Mason

James D. Miller Jason R. Mason

DATE: 6-20-91 DATE: 6/20/91

Based on information from Mr. David Frazier, Rollins' technical manager, the hazardous waste permit requires that the incinerator operate with a flue gas emission volume of not greater than 29,234 cubic feet per minute. Actual operating capacity is 5% to 10% less than this rate, according to Mr. Frazier.

The maximum permissible concentrations (LAC: 33 XV., Chapter 4, Appendix A, Table II, Column 1) for the release of uranium 238 (insoluble) and uranium 235 (insoluble) into the air in an unrestricted area are as follows:

uranium 235 (I) - 4 E-12 µCi/ml

uranium 238 (I) - 5 E-12 µCi/ml

According to information obtained during a telephone conversation with Larry Radcliff of the DOE on May 17, 1991, their records indicated that the total weight of waste stream #BR-16771 material ever received by Rollins (LA) was 1,188,316 pounds.

(1,188,316 pounds)(453.592 grams per pound) =

539,010,631 grams

Based on data from waste data sheets obtained on April 30, 1991, the range of total average uranium concentrations in the waste were as high as 5.47 micrograms per gram of waste, or

(5.47 µg/gm of waste)(539,010,631 grams of waste) =

2,948,388,152 µgm

or <u>2,948.4 gm uranium total in all waste</u>

Based on data from the waste data sheets the highest concentration of uranium 235 in the total uranium was referenced to be 2.6% of the total uranium, therefore;

2.6% of 2,948.4 grams of total uranium is

<u>76.7 grams of uranium 235.</u>

The specific activities of uranium 238 and uranium 235 are as follows:

uranium 238 SA = 3.34 E-7 µCi/g

uranium 235 SA = 2.14 E-6 µCi/g

therefore,

(2,948.4 grams uranium 238, total)(3.34 E-7 µCi/gm)

= 0.0010 µCi or 1,000 pCi of uranium 238, total

and, (76.7 grams uranium 235, total)(2.14 E-6 µCi/gm)

= 0.0002 µCi or 200 pCi of uranium 235, total.

Based on information obtained from Mr. David Frazier, Rollins technical manager, the minimum normal operating flue gas flow volume would be 10% less than 29,234 cubic feet per minute

or 26,310 cubic feet per minute,

or (26,310 ft^3/min.)(28.32 liters/ft^3)(1000 ml/liter)

= 745,099,200 ml/min.

Assuming that Rollins was authorized under a specific license to incinerate uranium 238 and uranium 235 and assuming that the concentration in the flue gas was at the maximum permissible concentration (MPC) for each radionuclide then,

(uranium 238(I)^{mpc} 5 E-12 µCi/ml)(745,099,200 ml/min.)

= 0.003725 µCi/min. or 3,725 pCi/min. of uranium 238

and

(uranium 235(I)^{mpc} 4 E-12 µCi/ml)(745,099,200 ml/min.)

= 0.002980 µCi/min. or 2,980 pCi/min. of uranium 235

would be released to the atmosphere from the stack without being in violation of the Louisiana Radiation Regulations.

The waste material received by the Rollins facility from the Y-12 plant was in liquid form. According to Mr. Frazier (Rollins), the maximum amount of liquid waste that can be incinerated in one day is 150,000 to 200,000 pounds. Assuming the maximum amount was burned in relation to the liquid waste received from the Y-12 facility, then it would take six (6) days to incinerate the entire 1,188,316 pounds of waste that was received at the Rollins facility. If we assume that this material was incinerated at the maximum capacity during six (6) consecutive days, the total maximum activity released to the atmosphere of uranium 238 and uranium 235 can be determined for each day. For the purposes of the worst case scenario, we must also assume that all of the uranium was ejected

to the atmosphere from the stack.

Therefore,

1000 pCi total uranium 238 divided by six (6) days or

166.7 pCi/day or 0.12 pCi/min.,

and based on the normal operating stack volume then,

(0.12 pCi/min.) ÷ (745,099,200 ml/min.)

= 1.6 E-10 pCi/ml or 1.6 E-16 µCi/ml of uranium 238 was released to the atmosphere.

Therefore,

200 pCi total uranium 235 divided by six (6) days or

33.3 pCi/day or 0.02 pCi/min.,

and based on the normal operating stack volume then,

(0.02 pCi/min.) ÷ (745,099,200 ml/min.)

= 2.68 E-11 pCi/ml or 2.68 E-17 µCi/ml of uranium 235 was released to the atmosphere.

Based on these calculations, assumptions and information, the release to the atmosphere from the Rollins' incinerator for uranium 238 and uranium 235 did not exceed the MPC's of the Louisiana Radiation Regulations.

The following calculations are referenced to support the information disclosed within the Rollins Environmental inspection report of June 6, 1991:

The natural abundance of potassium 40 is 0.0117% according to the Radiological Health Handbook, 1970 edition.

Composition of waste material from Digital Corp.

Potassium Hydroxide: K-39.09 gms/mole
O-16.00 gms/mole
H- 1.01 gms/mole

1.0 gms of KOH divided by 56.10 gms/mole = 0.0178 moles KOH/gm

39.09 gms/mole (K) divided by 56.10 gms/mole (KOH) = 0.7 (ratio of K concentration to KOH concentration in one gram of compound.

(0.7)(0.0178 moles KOH/gm) = 0.0124 moles K/gm of KOH.

(0.0124 moles K)(0.000117) = 1.4512 E-6 moles K-40.

(1.4512 E-6 moles)(6.02 E 23 atom/mole) = 8.7360 E 17 atoms K-40/gm KOH.

Activity = λ N; where

λ = 0.693 divided by 3.95 E 16 seconds(½-life of K-40); and
N = 8.74 E 17 atoms

therefore,

(0.693/3.95 E 16 sec)(8.74 E 17 atoms) = 15.35 dis/second

A = 15.35 dps divided by 3.7 E 10 dps/Ci =

4.15 E-10 Ci/gm or 414.8 picoCuries/gm K-40 per gram of KOH waste.

This value is a calculated value and is compared with the laboratory results which reference the activity of

525 picoCuries/gm K-40 per gram of KOH waste;

if we apply the proportionality equation as follows:

$$\frac{525}{x} = \frac{414.8}{0.0117}$$

then x = 0.0148% abundance of K-40;
Based on the confidence limits of the laboratory results the abundance range would be: 0.0143 - 0.0153%.

Memorandum

Attachment

DATE May 17, 1991

REPLY TO ATTN OF EM-331

SUBJECT Shipment of Waste Originating in Radiation Control Areas

TO Distribution

It has recently come to my attention that there may be an issue with the method(s) used to determine whether a waste is radioactive or nonradioactive. There have been instances in which sites have used or attempted to use inappropriate criteria to establish whether or not a Resource Conservation and Recovery Act (RCRA)-hazardous waste or Toxic Substance Control Act (TSCA)-regulated waste is radioactive. This situation has the potential of allowing materials which, by regulation or order, should be maintained under radiological controls being relinquished to a facility which is not authorized to receive them.

This memorandum is to direct you to cease the shipment to commercial facilities not licensed by the Nuclear Regulatory Commission or an agreement State of any RCRA-hazardous or TSCA-regulated waste originating in a radiologically controlled area until further notice.

In order to efficiently address this issue, all RCRA/TSCA hazardous waste originating in radiation control area is to be maintained within the DOE system until a method for its release is approved by Headquarters. Therefore, you are to submit information to this office that describes the criteria that are used, the bases for the criteria, and the methods used for measuring a waste for comparison to the criteria. This information will be reviewed by Headquarters to determine its regulatory and technical validity.

Where applicable, also provide information to this office describing how you assure that sanitary waste originating in a radiologically controlled area and sent to an offsite landfill or a publicly-owned treatment works is controlled.

In addition, considering the legal implications of properly recording and manifesting waste shipments, this process should be reviewed at your sites. This should include consideration of appropriate approval authorities, personnel understanding of data requirements, and proper training.

Any questions or submittal of information should be directed to Lee Stevens, EM-331 of my staff at FTS 233-7145 or (301) 353-7145.

Jill E. Lytle
Associate Director
Office of Waste Operations
Environmental Restoration
and Waste Management