

DATED: JAN 20, 1995;

SIGNED BY: RICHARD L. BANGART

Mark B. Horton, M.D., Director  
Department of Health  
301 Centennial Mall South  
P.O. Box 95007  
Lincoln, NE 68509

Dear Dr. Horton:

This is to transmit the results of the Nuclear Regulatory Commission's (NRC) review and evaluation of the Nebraska radiation control program conducted by Mr. Robert J. Doda, State Agreements Officer, Region IV, which was concluded on June 23, 1994. The results of this review were discussed with you and Mr. Randy Wood, Director, Nebraska Department of Environmental Quality. Another NRC representative, Mr. Richard A. Leonardi, Radiation Specialist, Region IV, assisted in the review and was present during this meeting.

As a result of our review of the State's program and the routine exchange of information between the NRC and the State of Nebraska, the staff has determined that the Nebraska program for the regulation of agreement materials is, at this time, adequate to protect the public health and safety and is compatible with the regulatory program of the NRC.

This year's program review found Nebraska with a much improved radiation control program. We commend the Department of Health (DOH) for addressing the three significant problems found during our 1992 program review: overdue regulations, low staffing level for agreement materials, and overdue inspections. The DOH's regulation package became effective May 30, 1994, with the result that DOH's regulations are compatible with NRC's regulations. The DOH staffing level for agreement materials was increased to a level consistent with NRC guidelines. At the time of the review, the inspection backlog was essentially up to date, with only two overdue inspections left to be accomplished and in November 1994, the Nebraska staff informed us that one of the inspections had been completed and only one overdue inspection remained. We believe DOH's management attention has been the principle reason for these improvements.

Please note that there has been a change made in the format of this letter from our previous review letters. This letter summarizes the findings regarding all 30 program indicators as opposed to only discussing those indicators where deficiencies were noted. Enclosure 1 contains an explanation of our policies and practices for reviewing Agreement State Programs. Under the new format, Enclosure 2 would contain a summary of the review findings where recommendations are made for improvements in the radiation control program. However, Nebraska meets the guidelines in all 30 indicators; thus, no recommendations are provided.

Mark B. Horton

-2-

Enclosure 3 presents a summary of the review findings where the State has adequately satisfied the indicators.

I appreciate the courtesy and cooperation extended by your staff to Mr. Doda and the other NRC representative during the review.

Sincerely,

Richard L. Bangart, Director  
Office of State Programs

Enclosures:  
As Stated

cc w/encls:  
Randy Wood, Director  
Department of Environmental Quality  
Harold R. Borchert, Director  
Division of Radiological Health, DOH  
Jay D. Ringenberg  
LLRW Program Manager, DEQ

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-2-

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Jay D. Ringenberg  
LLRW Program Manager, DEQ

\*See previous concurrence.      \*\*Concurrence by e-mail and phone.

OFC	RIV:RSAO	RIV:DRA	OSP:SPM	OSP:DD
NME	RJDoda	JMontgomery	CHMaupin	PLohaus
DTE	12/13/94**	12/13/94**	12/20/94*	12/21/94*

OFC	NMSS:D	OGC	OSP:D	DEDS	EDO		
NME	RBernero	FCameron	RBangart	HLThompson	JMTaylor		
DTE	12/15/94*	12/16/94*	5/ /97	5/ /97	5/ /97		

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( Please note that addressee on Letter is the State Liaison Officer.)

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JGilliland, RIV  
MKnapp, NMSS  
HNewsome, OGC  
CHackney, RIV  
RDoda, RIV  
EJordan, AEOD  
DCD (SP01) PDR Yes\_X\_\_\_ NO\_\_\_  
Nebraska File

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 several 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 these 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 significant Category I comments are provided, 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 a particular program area(s) is critical. 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. 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. 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 proceedings to suspend or revoke all or part of the Agreement in accordance with Section 274j of the Act, as amended.

ENCLOSURE 1

SUMMARY OF ASSESSMENTS AND RECOMMENDATIONS  
FOR THE NEBRASKA RADIATION CONTROL PROGRAM  
JUNE 26, 1992 TO JUNE 24, 1994

SCOPE OF REVIEW

The 26th regulatory program review of the Nebraska radiation control program was conducted during the period June 20-24, 1994 in Lincoln, Nebraska. 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 policy statement. The review included an inspector accompaniment, discussions with program management and staff, technical evaluation of selected license and compliance files, review of policies and procedures and the evaluation of the State's responses to an NRC questionnaire that was sent to the State in preparation for the review.

The State was represented by Harold Borchert, Director, Division of Radiological Health and Jay Ringenberg, Manager, Low-Level Radioactive Waste (LLRW) Program. The review of the program also included discussions with upper level managers within the Department of Health (DOH) and the Department of Environmental Quality (DEQ). A review of selected license and compliance files was conducted during June 20-22, 1994. A review of legislation and regulations, organization, management and administration, and personnel was conducted June 22-23, 1994. A summary meeting regarding the results of the regulatory program review was held with Dr. Mark B. Horton, Director, Department of Health, and Mr. Randy Wood, Director, Department of Environmental Quality on June 23, 1994, in Lincoln, Nebraska.

A portion of time during the review was spent on matters relating to U.S. Ecology's application for a license for the disposal of low-level radioactive waste at its proposed disposal site in Boyd County. NRC's low-level radioactive waste management staff did not participate in this review.

In addition to the routine office review, an inspection accompaniment with a State inspector was made at Boys Town National Research Hospital, Omaha, Nebraska, on June 15, 1994.

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 Nebraska, the staff has determined that the Nebraska program for the regulation of agreement materials is, at this time, adequate to protect the public health and safety and is compatible with the regulatory program of the NRC.

## STATUS OF PROGRAM RELATED TO PREVIOUS NRC FINDINGS

The previous NRC routine review was concluded on June 26, 1992, and comments and recommendations were hand delivered to the State in a letter on September 17, 1992. At that time, a finding could not be made that the program was adequate to protect the public health and safety and compatible with the NRC's program for the regulation of similar materials, due to three significant problems: overdue regulations, low staffing level for agreement materials, and overdue inspections.

The 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. Nebraska's revised radiation control regulations became effective on May 30, 1994.

The current status of the comments and recommendations from the previous program review are discussed below.

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

The issue addressed in the following comment and recommendation has been satisfactorily resolved and is considered closed.

#### Comment from the June 1992 Routine Review

The review of the State's radiation control regulations disclosed that the State's regulations are compatible with the NRC regulations up to the 10 CFR Parts 30, 40, and 70 amendments on decommissioning that became effective on July 27, 1988. This decommissioning amendment is a matter of compatibility and in accordance with current NRC practice, if this particular amendment is on track for adoption by 1993, a finding of compatibility is not withheld, and the finding is of minor significance. The State has initiated rulemaking on the decommissioning rule and it is projected to become effective prior to July 1993.

Other regulations have also been adopted by NRC that are matters of compatibility and these regulations need to be adopted within three years after the effective date. For planning purposes, these regulations are identified below with the Federal Register (FR) notice and the date that the State needs to adopt the regulation to maintain compatibility.

- "Emergency Planning Rule," 10 CFR Parts 30, 40, and 70 amendments (54 FR 14051) are needed by April 7, 1993.
- "Safety Requirements for Radiographic Equipment," 10 CFR Part 34 amendments (56 FR 843) are needed by January 10, 1994.
- "Standards for Protection Against Radiation," 10 CFR Part 20 amendments (56 FR 61352) are needed by January 1, 1994.

- "Notification of Incidents," 10 CFR Parts 20, 30, 31, 34, 39, 40, and 70 amendments (56 FR 40757) are needed by October 15, 1994.
- "Quality Management Program and Misadministrations," 10 CFR Part 35 amendments (56 FR 153) are needed by January 27, 1995.

Recommendation from the June 1992 Routine Review

We recommend that the decommissioning amendment be adopted as soon as possible. In addition, the radiation control program (RCP) should begin to address the other regulations that are needed to maintain compatibility.

Current Status

The amended Nebraska regulations (Title 180) became effective on May 30, 1994. This regulation package included amendments for decommissioning requirements, emergency plans, safety requirements for radiographic equipment, 10 CFR Part 20-equivalent regulations and notification of incidents. These amendments resulted in the Nebraska's regulations being compatible with NRC's regulatory program.

2. Staffing Level (Category II Indicator)

The issues addressed in the following comments and recommendations have been satisfactorily resolved and are considered closed.

Comments from the June 1992 Routine Review

Comment A.

Staffing is still a serious problem in the Division of Radiological Health (DOH). The Division is below NRC guidelines for the agreement materials program due to two experienced staff members recently leaving the Division. Internally, the Division has made several key reassignments to address this problem, such as assigning one of their staff members as project manager with DEC (Department of Environmental Control was changed to Department of Environmental Quality), for the LLRW project, and another member being moved from the X-ray Group to the Licensing and Inspection Group. The Division is currently recruiting for four technical positions with no success thus far. The lack of staff is heavily reflected in the significant overdue inspection backlog that the Division currently has.

Nebraska should consider that it has a large radiation control program from the standpoint of the diversity of licensees and other radiation control activities. The State has regulatory responsibilities for irradiators, manufacturers, broad academic, broad medical, a radiopharmacy, radiographers, and is responsible for emergency response planning for two nuclear power plants, in addition to other routine regulatory matters. Therefore, Nebraska should be at the upper end of NRC's recommended staffing range.



Comment B.

NUREG-1200, Standard Review Plan for the Review of a License Application for a Low-Level Radioactive Waste Disposal Facility, provides guidance for the review and assessment of the safety and performance of a low-level radioactive waste disposal facility with respect to release of radioactivity and possible resultant radiological impacts on individuals. This standard review plan emphasizes the importance of performance assessments as a means of determining compliance with the regulatory criteria.

We noted during the review that the Nebraska LLRW disposal program was using consultants and staff members from DEC and DOH to conduct performance assessments and verify results. However, it was not apparent that the State was developing an on-staff health physicist with the capability of running computer codes and verifying the sensitivity of the codes to various input parameters. Performance assessments may be necessary during the operational and closure periods of a facility, in addition to strictly during the licensing phase of a LLRW disposal facility.

Recommendations from the June 1992 Routine Review

Recommendation A.

We recommend the Division immediately increase its staffing level for the agreement materials program into the NRC's recommended range of 1.0 to 1.5 FTE per 100 licenses.

Current Status A.

DOH increased the staffing level to 1.8 person-years per 100 licenses in the agreement materials program. This level meets NRC guidelines.

Recommendation B.

We suggest the State consider the need to develop an on-staff health physicist with the capability of running and evaluating the various codes for performance assessment as the licensing process continues. The State should consider the value of having this experience available in the future for the LLRW disposal facility's operational and closure periods.

Current Status

The State is using consultants for all code work associated with performance assessment (PA) for the LLRW disposal facility license application. A manager in DOH plans to be familiar with this process to understand what changes in input parameters may mean to final results. However, performance assessment may be one area where the State will have to hire a consultant again after an operational license is issued.

3. Technical Quality of Licensing Actions (Category I Indicator)

The issue addressed in the following comment and recommendation has been satisfactorily resolved and is considered closed.

Comments from the June 1992 Routine Review

Our program review disclosed that the Division has started using a licensing condition (Good Samaritan Hospital, License No. 09-02-01) whereby radioactive materials with half lives of 300 days or less may be held for decay for 10 half lives and then disposed of without regard to radioactivity. We understand that this condition was developed for cobalt-57 (half life of 270 days), a naturally occurring and accelerator produced radioactive material (NARM) not regulated by the NRC. Nonetheless, we believe a license condition should not be less restrictive than what NRC currently authorizes in its licensing practice.

Recommendation from the June 1992 Routine Review

We recommend that the State restrict this license condition to NRC's current practice, i.e., radioactive materials with half lives of less than 120 days may be held for decay in storage. In the alternative, the Division may wish to submit a written rationale for an extension to 300-day half-life materials to the NRC for evaluation.

Current Status

The NRC staff has decided to withdraw its 1992 comment in this area. The DOH license condition previously commented on in 1992 is only used for Co-57 sources used in hospitals. Since Co-57 is NARM, it is not included within the scope of agreement materials regulated by the State under the Agreement with the NRC; thus, it was outside the purview of the NRC routine review.

4. Status of Inspection Program (Category I Indicator)

The issue addressed in the following comment and recommendation has been satisfactorily resolved and is considered closed.

Comments from the June 1992 Routine Review

To date, the Division of Radiological Health has not been able to reduce the backlog of inspections due. The reassignment and retraining of one individual within the Division, although a step in the right direction, is not enough to address this problem fully. Recruitment of the four additional positions already authorized within the Division is a necessity.

The current inspection backlog for Priority I and II inspections stands at 28. Twenty of these are overdue by more than 50 percent of their inspection interval, more than that found in the last review. In addition, there are 25 overdue initial inspections. The NRC staff considered the overall backlog, the number of routine inspections that need to be done to maintain the inspection program, and the staff resources that will be available to the State. We conclude that the backlog can be eliminated by adding the additional staff, as mentioned above.

Inspection of major licensees must be brought up to date as soon as possible and a program should be implemented to stabilize and reduce the list of Priority I and II inspections that are overdue for inspection.

The Division has a plan to address the inspection backlog; however, it can only be fully implemented by the additional staff currently being recruited.

#### Recommendation from the June 1992 Routine Review

We recommend that the Division of Radiological Health fill the technical vacancies expeditiously and eliminate the inspection backlog in accordance with the existing plan.

#### Current Status

The DOH has added staff (2) to the licensing and inspection section for agreement materials. (The remaining two vacancies filled were for the DOH LLRW Section.) They have also utilized a consultant to reduce the large backlog of inspections at the time of the previous review. At the time of the review, the backlog of inspections was essentially up to date with only two overdue inspections left to be completed for the priority 1 and 2 inspections. In November 1994, the State informed the NRC that one of the overdue inspections had been completed and only one overdue inspection remained. For further details, please see "Status of Inspection Program" in Enclosure 3.

#### CURRENT REVIEW ASSESSMENTS AND RECOMMENDATIONS

The Nebraska radiation control program (RCP) satisfies the guidelines in all of the 30 indicators. These indicators are discussed in Enclosure 3.

#### Summary Discussions with State Representatives

A summary meeting to present the results of the program review was held on June 23, 1994, by Mr. Robert Doda, Region IV State Agreements Officer, NRC, with Dr. Mark B. Horton, Director, Department of Health, and Mr. Randy Wood, Director, Department of Environmental Quality. Other summary meetings were also held with staff members in DOH and DEQ.

The State was informed of current findings on the improvements in the program in response to the NRC recommendations from the previous program review. In particular, the DOH program was commended for the management attention that focused on the three significant problems found during NRC's 1992 program review: overdue regulations, low staffing level for agreement materials, and overdue inspections. DOH's regulations were found to be compatible with NRC's regulations. Overdue inspections were essentially brought up to date.

The problem of filling staff vacancies in the DOH agreement materials program was addressed by adding two persons to the licensing and inspection section. The previous difficulty in filling vacancies for license and inspection activities appeared to be the primary reason for a previous backlog of overdue inspections.

A closeout discussion with the DOH technical staff was held on June 22, 1994. The State was represented by Harold Borchert and other Division staff. Several general and specific questions were raised by the State representatives. A briefing was conducted by the NRC reviewer on NRC's new formats for the reporting of State incidents and State statistical information to the NRC.

SUMMARY OF ASSESSMENT OF INDICATORS ADEQUATELY SATISFIED  
BY THE NEBRASKA RADIATION CONTROL PROGRAM  
JUNE 26, 1992 TO JUNE 24, 1994

The assessments below are based upon the evaluation of the State's written response to the questionnaire, comparison with previous review information, discussions with the program managers and staff members, review team observations, licensing and inspection casework file reviews, review of the State's policies and procedures and an inspector accompaniment. The Nebraska radiation control program satisfies in all of the 30 program indicators. These indicators are as follows.

1. 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. States regulating the disposal of low-level radioactive waste in permanent disposal facilities must have statutes that provide authority for the issuance of regulations for low-level waste management and disposal. The statutes should also provide regulatory program authority and provide for a system of checks to demonstrate that conflicts of interest between the regulatory function and the developmental and operational functions shall not occur.

Assessment

Based upon previous program reviews, discussions with Nebraska staff, review of responses to the NRC routine review questionnaire, and the confirmation of applicable statutes, the following assessment was made.

Clear statutory authority exists which designates the Department of Environmental Quality (DEQ) as the agency responsible for the commercial disposal of low-level radioactive waste, Nebraska Revised Statutes 81-1578, et seq. The balance of the State's radiation control program (RCP) is defined in the Radiation Control Act, Nebraska Revised Statutes 71-3501, et seq. This act designates the Department of Health (DOH) as the agency responsible for occupational and public health and safety and the environment as related to radiation. As such, DOH is singularly responsible for the regulation of the use of Atomic Energy Act materials and all other disposal of radioactive material, outside of the Nebraska Low Level Radioactive Waste Disposal Act.

2. 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 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.

Assessment

The amended DOH regulations (Title 180) became effective on May 30, 1994. This regulation package included amendments for decommissioning requirements, emergency plans, safety requirements for radiographic equipment, 10 CFR Part 20-equivalent regulations and notification of incidents. These amendments resulted in the Nebraska regulations being compatible with NRC's regulatory program.

3. 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.

Assessment

The following assessment was based upon discussions with the Nebraska RCP staff and a review of the State's organizational charts. The Nebraska RCP is located primarily in the Division of Radiological Health, DOH. The licensing and regulation of the commercial low-level radioactive waste disposal site in Nebraska involves both the Low-Level Radioactive Waste (LLRW) Program, DEQ and the Division of Radiological Health, DOH. DOH has a health physicist assigned to DEQ activities who has offices in both DEQ and DOH. Adequate access to appropriate levels of State management is maintained through the Directors of both Departments. A memorandum of understanding (MOU) is maintained by both Departments, and there are periodic Director's meetings on the LLRW disposal project in Nebraska.

4. Internal Organization of the RCP (Category II)

NRC Guidelines

The RCP should be organized with the view toward achieving an acceptable degree of staff efficiency, place appropriate emphasis on major program functions, and provide specific lines of supervision from program management

for the 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.

#### Assessment

Based on discussions with staff at DEQ and DOH and review of organizational charts, the following assessment was made. The Director of the Division of Radiological Health in DOH provides administrative and managerial support to the radiation control program. A Section Manager is responsible for licensing and inspection of radioactive material users. Another Section Manager is responsible for the LLRW waste activities for the DOH. This person has an office in DEQ's LLRW Section and provides day-to-day liaison between both departments for all commercial LLRW disposal issues. Since this position was established, there has been a close working relationship between DEQ's LLRW disposal license review process and DOH's LLRW disposal health physics responsibilities. The DOH's LLRW Section has three staff persons reporting to the Section Manager.

The LLRW Program in the DEQ is responsible for the regulation of a commercial LLRW disposal facility within the Central Interstate Compact. Most of the work is performed by contractors who report to eight different review managers.

Given the size of the programs, these organizations appear to be adequate for achieving an acceptable degree of staff efficiency and providing specific lines of supervision for program management and execution of program policy.

#### 5. 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.

##### Assessment

Based on discussions with staff at DEQ and DOH, the following assessment was made. Legal staff is assigned to the Department of Health and the Department of Environmental Quality. Other legal staff is available from the State Attorney General's office, if the need exists, for escalated enforcement actions. Major areas of legal support have included determining if requested information could be released to the general public, tracking "lost" licensees, reviewing contracts with consultants, and reviewing regulations, such as regulations equivalent to 10 CFR Part 20, and issuing an Intent to Deny the application for the LLRW disposal facility in Nebraska. Legal assistance has been adequate for the Nebraska radiation control programs.

#### 6. 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.

#### Assessment

Based upon discussions with staff and review of the RCP's responses to the NRC questionnaire, the DOH radiation control program has a formal technical advisory committee. The Radiation Advisory Council, which is composed of nine members, serves as the advisory committee for DOH. In addition, the RCP would call upon other experts for assistance, if needs arise. Conflicts of interest are avoided by using advisors from institutions not associated with particular cases.

DOH also relies on the NRC's Office of State Programs, Region IV personnel, and the Department's consultant for assistance with technically complex licensing or inspection programs.

The Nebraska DEQ LLRW does not have a formal technical advisory committee. DEQ used technical assistance from NRC on at least two occasions (May 1994 and August 1992) for activities associated with the review of the license application for the Nebraska LLRW disposal facility during the review period.

#### 7. Contractual Assistance (Category II)

##### NRC Guidelines

Because of the diversity and complexity of low-level radioactive waste disposal licensing and regulation, States regulating the disposal of low-level radioactive waste in permanent disposal facilities should have procedures and mechanisms in place for acquisition of technical and vendor services necessary to support these functions that are not otherwise available within the RCP. The RCP should avoid the selection of contractors which have been selected to provide services associated with the low-level radioactive waste facility development or operations.

#### Assessment

Based upon discussions with the RCP staff and the RCP's responses to the NRC routine review questionnaire, the following assessment was made. The Nebraska DEQ LLRW Program uses a broad spectrum of contractors for the license review process, with oversight by eight different technical review managers. These technical review managers are consultants hired to oversee eight different technical review groups to see that acceptable work products are obtained. An extensive quality assurance (QA) program is in place to monitor the progress of all review activities. Audits of contractors or agencies performing license review activities are performed by specified State staff and consultants to determine conformance with the technical review requirements. Complete documentation of the QA program activities are maintained by the DEQ staff. Conflicts of interest are avoided by selecting contractors not involved in site development activities.

#### 8. 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 actions 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.

#### Assessment

Based upon discussions with the RCP staff and the RCP's responses to the NRC routine review questionnaire, the following assessment was made. DOH has the lead responsibility in Nebraska for response to radiological incidents, including the proposed LLRW disposal facility. Nebraska's Radiological Emergency Response Plan provides response actions for all radiological incidents.

The purpose of this plan is to:

- (1) provide an effective means for responding to a radiological incident and to establish a mechanism for mitigating any consequences,
- (2) to provide guidance for agencies, users, licensees, and individuals in the State of Nebraska whose responsibilities are such that they might be called upon to assist under emergency conditions, and
- (3) to identify the appropriate agencies and individuals to notify in case of an emergency.

Notification procedures provide for notification and communication with appropriate government agencies and are organized so that qualified individuals are readily available through identifiable channels of communication. The plan also identifies responsibilities and actions to be taken by State agencies.

The State's emergency plan is a comprehensive one which is intended to cover major accidents at nuclear facilities but it also adequately covers non-catastrophic incidents. The plan is reviewed periodically to assure it is kept current. Page changes are issued as necessary. The February 11, 1994, revision did not change the agreement materials aspects of the plan.

#### 9. Budget (Category II)

##### 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. States regulating the disposal of low-level radioactive waste facilities should have adequate budgetary resources to allow for changes in funding needs during the low-level radioactive waste facility life cycle. After appropriations, the sources of program funding should be stable and protected from competition from or invasion by other State programs. 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.

#### Assessment

Based upon discussions with the RCP staff and the RCP's responses to the NRC routine review questionnaire, the following assessment was made. DOH funding is sufficient to support the radioactive materials program. The program managers stated that there are no impediments to travel, equipment purchase, or administrative support. All of the DOH license fees are specifically earmarked for the Division of Radiological Health in DOH. Approximately 30 percent of operating revenues for DOH's materials program are covered by license fees. It should be noted that an operating deficit of approximately \$86,000 is expected this year. DOH is rectifying this by revising license fees.

The Nebraska LLRW Program (DOH and DEQ) is fully supported (100%) by waste generator fees assessed to waste generators within the Central Interstate Compact member States and the Nebraska material licensees.

#### 10. 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. In addition, States regulating the disposal of low-level radioactive waste facilities in permanent disposal facilities should have access to laboratory support for radiological and non-radiological analyses associated with the licensing and regulation of low-level waste disposal, including soils testing, testing of environmental media, testing of engineering properties of waste packages and waste forms, and testing of other engineering materials used in the disposal of low-level radioactive waste. Access to laboratory support should be available on an "as needed" basis for nonradiological analyses to confirm licensees' and applicants' programs and conditions for nonradiological testing should be prescribed in plans or procedures.

##### Assessment

Based upon evaluation of the laboratory during previous reviews, discussions with the RCP staff and the RCP's responses to the NRC routine review questionnaire, the following assessment was made. The DEQ laboratory has recently combined with the DOH laboratory. Also, the DEQ LLRW Program has provided radiological analytical equipment for the Health Physicist Assessment Facility, which provides DOH with confirmatory measurements for the LLRW disposal facility. This facility is located in a small building in Butte, Nebraska; and will contain a hood, and sample preparation and analytical equipment for various radiological determinations. The State is using this facility to develop independent environmental data for the low-level radioactive waste disposal site. The DEQ LLRW Program has contracted with a commercial radiological analytical lab, with a commercial non-radiological lab, and with a soils and materials lab. The Nebraska laboratory support for the agreement materials program is adequate.

11. 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.

Assessment

A review of DOH's administrative procedures manual indicated that written administrative procedures have been established and are in use by personnel. The procedures are located in the inspection manual, the administrative procedures manual and in policy memoranda. Procedures exist for preparation of licenses, license termination, license fee tracking, reciprocity actions, media communications, NRC exchange of information, and other functions required of the program.

DOH also has 20 current written procedures for the radiological environmental surveillance program established for the LLRW disposal facility.

DEQ has an extensive Licensing Program Plan consisting of 10 different sections. As part of this plan, DEQ has written and is using 57 individual licensing procedures for review of the LLRW disposal facility application.

DEQ and DOH personnel are kept informed of new procedures and changes in procedures through periodic staff meetings.

12. 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, low-level radioactive waste disposal facilities, large scope-Type A Broad, and those which have the potential for significant releases to the environment) should receive second party review (supervisory, committee, consultant). Supervisory review of inspections, reports and enforcement actions should also be performed. For the implementation of very complex licensing actions, such as initial license review, license renewals and licensing actions associated with a low-level radioactive waste disposal facility, there should be an overall Project Manager responsible for the coordination and compilation of the diverse technical reviews necessary for the completion of the licensing action. The Project Manager should have training or experience in one or more of the main disciplines related to the technical reviews which the Project Manager will be coordinating such as health physics, engineering, earth science or environmental science. When regional offices or other government agencies are utilized, program management should conduct periodic audits of these offices.

### Assessment

Based upon evaluation of the RCP's inspection tracking system, discussions with the RCP staff and the RCP's responses to the NRC routine review questionnaire, the following assessment was made. The DOH program has inspection and licensing status data available from the Division's tracking system. Status reports from the tracking system are generated which contain current and projected lists of inspections and license review cases that are due for action and provide management with the means to assign priorities. Weekly meetings are held with staff to discuss casework, policies, goals, and problems.

The DOH radioactive materials program maintains continual ongoing review of license cases with the staff during processing. Staff bring issues and questions to the Division Director for resolution. The Director also has the opportunity to discuss and review the licensing action with the staff prior to its approval.

The low-level radioactive waste program management structure (DEQ and DOH) assures that management review is handled by an ongoing process that includes reviews by an Overview Committee (Licensing Program Plan) and management from both DEQ and DOH. The Overview Committee (composed of two DEQ staff members, one DOH staff member, and two consultants) implements the Licensing Program Plan to assure that the eight technical review managers adequately perform the license review responsibilities that have been assigned to them. Individual consultants (approximately 100 total persons) report to the technical review managers.

### 13. 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. States should have a license document management system that is capable of organizing the volume and diversity of materials associated with licensing and inspection of radioactive materials. Professional staff should not be used for fee collection and other clerical duties.

#### Assessment

Based upon discussions with the RCP staff and responses to the NRC routine review questionnaire, adequate equipment and support services are being supplied within the DOH program and the DEQ program. DOH has word processing (Word Perfect 5.1 and Word Perfect for Windows), data processing and spread sheet programs (Lotus 123, Dbase IV, and Quattro Pro) services available. DEQ has word processing (Word Perfect 5.1) capabilities also.

### 14. 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 during the process of major licensing actions

associated with UMTRCA and low-level radioactive waste in permanent disposal facilities.

#### Assessment

Based upon discussions with the RCP staff and responses to the NRC routine review questionnaire, the following assessment was made. All agency files, including licensing and inspection files, are open and available to the public subject to limitation of the open records statutes. As a general rule, only the following categories of information contained in licensing and inspection files are not open records: (a) medical records, (b) proprietary information, and (c) files on active investigations where disclosure would jeopardize the outcome of the investigation.

#### 15. 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. For States regulating uranium mills and mill tailings, staff training and experience should also include hydrology, geology, and structural engineering. For programs which regulate the disposal of low-level radioactive waste in permanent facilities, staff training and experience should include civil or mechanical engineering, geology, hydrology, and other earth science, and environmental science. In both types of materials, staff training and experience guidelines apply to available contractors and resources in State agencies other than the RCP. Written job descriptions should be prepared so that professional qualifications needed to fill vacancies can be readily identified.

##### Assessment

Based upon discussions with the RCP staff and responses to the NRC routine review questionnaire, the following assessment was made. Both DEQ and DOH technical staff members all have bachelor degrees or have specific training in the use of radioactive materials.

DOH managers and staff have attended numerous technical training courses and have considerable experience with radiation safety programs. A consultant with significant experience in inspection and enforcement for radiation control programs is under contract with the DOH and is available for advice, training, and procedures manuals. The DOH program maintains specific job specifications for the program staff.

Formal job classification sheets for currently existing classified professional categories in the DEQ LLRW disposal program are used.

#### 16. Staffing Leveling (Category II)

##### NRC Guidelines

Professional staffing level should be approximately 1-1.5 person-year per 100 licenses in effect. The RCP must not have less than two professionals available with training and experience to operate the RCP in a way which provides continuous coverage and continuity. The two professionals available to operate the RCP should not be supervisory or management personnel. 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. States which regulate the disposal of low-level radioactive waste in permanent disposal facilities should allow a baseline RCP staff effort of 3-4 professional technical person-years (in addition to the two professionals for the basic RCP indicated in the first bullet of this indicator). However, in some cases, the level of site activity may be such that a lower level is adequate, particularly if contractor support is on call. In any event, staff resources should be adequate to conduct inspections on a routine basis during operations of the low-level radioactive waste facility, including inspection of incoming shipments and licensee site activities and to respond to emergencies associated with the site. During periods of peak activity additional staff or specialty consultants should be available on a timely basis.

#### Assessment

Based upon discussions with the RCP staff and responses to the NRC routine review questionnaire, the following assessment was made. The DOH program for agreement materials now has a staffing level of 1.8 person years per 100 licenses. This is much improved over previous reviews. Three technical staff members are available for licensing and inspection activities.

The DOH LLRW Program has a manager and three staff members in the following areas: (1) development and implementation of the State's environmental surveillance program, (2) development and implementation of the State's health physics assessment facilities analytical procedures and program, and (3) permit activities (handling, processing, packaging and storage) at the LLRW generators.

The DEQ LLRW Program is staffed by four technical staff members. It should be noted here that the coordinator for questions and answers during the license review process is still involved as a consultant to the program (this person retired in April 1994). The DEQ staff manages approximately 100 consultants through eight review managers in this program.

In the area of performance assessment for the LLRW disposal facility, the State plans to use a consultant to run codes and produce final results. A manager in DOH plans to be familiar enough with this process to understand what changes in input parameters may mean to final results. However, performance assessment may be one area where the State will have to hire a consultant again after an operational license is issued.

The current level of staffing in Nebraska is deemed adequate for the scope of the programs. There are adequate supervisory functions to provide guidance and direction to State staff.

#### 17. 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.

##### Assessment

Based upon discussions with the RCP staff and responses to the NRC routine review questionnaire, the following assessment was made. In the DOH, the Division Director and the Section Managers provide licensing and inspection guidance to junior personnel. Currently, all inspection letters and licensing actions are reviewed and signed by one of those individuals. Senior level personnel in DOH review licensee documents, make necessary changes if any, and sign licenses. Senior personnel are responsible for ensuring that the licensing activities are appropriate and according to DOH policy. Inspectors' work is monitored by review of their inspection preparation, debriefing upon return, and review of inspection reports and letters. License reviewers' work is monitored by supervisory review of checklists, deficiency letters, and licensing documents.

In the DEQ LLRW Program, the four technical staff members manage approximately 100 consultants through eight review managers. An overview committee is used to meet with the individual review managers to assess and direct the activities of each review manager.

18. Training (Category II)

NRC Guidelines

Senior personnel should have attended NRC core courses in licensing orientation, inspection procedures, medical practices and industrial radiography practices. 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. The RCP staff should be afforded opportunities for training that are consistent with the needs of the program.

Assessment

Based upon discussions with the RCP staff and responses to the NRC routine review questionnaire, the following assessment was made. Both the DOH and DEQ have senior staff that are well qualified and have attended many related training courses over the years. Most of the senior personnel in the radiation control program have attended the NRC core courses. The State emphasizes the NRC core courses for basic program training for their staff members and some new staff members are in need of attending these courses. Initial training of new employees usually involves informal (on-the-job) training, including working under the close supervision of senior personnel in conducting materials inspections and reviewing simple licensing actions.

19. 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.

## Assessment

Based upon discussions with the RCP staff and responses to the NRC routine review questionnaire, the following assessment was made. The DOH's agreement materials program did not have any personnel leaving the agency during this period.

The DEQ LLRW Program experienced the retirement of the license review coordinator. However, he has been retained under contract to DEQ to maintain the uniformity of the review process.

### 20. 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 that these elements 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. Additionally, in States which regulate the disposal of low-level radioactive waste in permanent disposal facilities, the RCP should assure that essential elements of waste disposal applications meet State licensing requirements for waste product and volume, qualifications of personnel, facilities and equipment, operating and emergency procedures, financial qualifications and assurances, closure and decommissioning procedures and institutional arrangements in a manner sufficient to establish a basis for licensing action. Licensing activities should be adequately documented including safety evaluation reports, product certifications or similar documentation of the license review and approval process. 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.

#### Assessment

At the time of the routine review, the Nebraska RCP had 168 material licenses in effect. During the 1993 calendar year, nine new licenses were issued; 14 licenses were terminated; 41 licenses were renewed; and 364 amendments were issued. A review of 10 selected license files in DOH was performed during the routine review. In general, the essential elements of applications were found to be sufficient to establish a basis for licensing action. The State performed three prelicensing visits since the last program review. The staff stated that prelicensing visits are made on a case-by-case basis. Licensing policies and practices appear to be consistent with those followed by the NRC. Cover letters are used by the State to transmit the license or the license amendment to the licensee. The State has a five-year license renewal program. During these renewals, all supporting information in the application must reflect the current scope of the licensee's program.

The DEQ LLRW Program has an extensive license review process for the LLRW disposal application. The many consultants used in the program are monitored through eight review managers. A quality assurance program is in place and audits are performed of work done by contractors (including audits of work performed by State agencies).

## 21. 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. Approval documents for radioactive waste packages, solidification and stabilization media, or other vendor products used to treat radioactive waste for disposal should be complete and accurate as to the use, capabilities, limitations, and site specific restrictions associated with each product.

### Assessment

The DOH staff stated that no sealed source or device evaluations were performed since the previous review.

For the DEQ LLRW Program, one staff assignment includes generator permit activities, such as, handling, processing, and storage of LLRW. Due to the closing of the Barnwell LLRW disposal site to the Central State Compact on June 30, 1994, Nebraska is placing strong emphasis on the storage of LLRW, e.g., waste form, solidification, and stabilization of LLRW by all types of licensees within the Compact.

## 22. Licensing Procedures (Category II)

### NRC Guidelines

The RCP should have internal licensing guides, checklists, and policy memoranda consistent with current NRC practice. In States which regulate the disposal of low-level radioactive waste in permanent disposal facilities, the RCP should have program specific licensing guides, plans and procedures for license review and policy memoranda which relate to specific aspects of waste disposal. The program should include the preparation of safety evaluation reports, product certifications, or similar documentation of license review and approval process. 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.

### Assessment

Based primarily on RCP staff discussions and review of RCP documents, the reviewer determined that the DOH program uses internal licensing guides, checklists and policy memoranda consistent with current NRC practices. License applicants are furnished copies of applicable guides and regulatory positions. The DOH prepares written Nebraska versions of NRC licensing guides. Coordination of licensing actions is not a problem since the staff



does both license reviews and compliance inspections. Preliminary review and screening of applications are normally done within a few days of receipt. License expiration notices are sent to licensees 60 days prior to expiration. The State utilizes timely renewal procedures. Licenses are issued for five-year periods.

In general, files are maintained in a way to allow accurate retrieval of information and documentation of discussions and visits. The State has a system such that all licensing and compliance documents are filed together in the same folder. Division personnel maintain statistical data regarding the number and types of licenses, inspection of such licenses by category, and furnish such statistical data to the NRC on a timely basis and on special request. The State uses standard license conditions similar to those used by NRC. At the time of the review, there was a backlog of 10 renewal license applications and 20 amendments due to the effort the Division has applied to bringing the inspection backlog up to date. (New license applications are given priority and are reviewed immediately.) One renewal application is a complex action that is taking an extended amount of time. Creighton University is attempting to have 13 specific licenses combined into one broad license. The specific licenses remain in effect, in the interim, and inspections are performed according to schedule until a broad license is issued.

The DEQ LLRW Program has a Licensing Program Plan which includes all the steps involved in the issuance of a low-level radioactive waste disposal license. An extensive list of licensing procedures are in place as of the date of the review (about 57). Also, the DOH has a radiological environmental surveillance program with about 20 procedures in place. A quality assurance management plan is used to assess and coordinate all requirements of the license review process. The State's most pressing need at the moment is in the determination of the source term to be use in the performance assessment for the low-level radioactive waste disposal facility.

### 23. 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 inspection program in all States should provide for the inspection of licensee's waste generation activities under the State's jurisdiction. In States which regulate the disposal of low-level radioactive waste in permanent disposal facilities, the RCP should include provisions for pre-operational, operational, and post-operational facility inspections. The inspections should cover all program elements which are relevant at the time of the inspection and be performed independently of any resident inspector program. In addition, inspections should be conducted on a routine basis during the operation of the low-level radioactive waste facility, including inspection of incoming shipments and licensee site activities. 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.

### Assessment

Based upon discussions with staff, review of inspection status reports, and responses to NRC routine review questionnaire, it was determined that the State made significant progress at clearing up a large list of overdue inspections from the last routine program review. During the period covered by this review, the State performed 92 inspections. As of November 1994, there was one license overdue for inspection. The overdue inspection is a priority 2 according to NRC's inspection procedures and is presently 10 months overdue for inspection. This licensee is a mobile nuclear medicine license in the western part of the State. Even though the State was unable to conduct this initial inspection, an inspector visited Front Range Mobile Imaging Services, Inc. after the license was issued. The inspector interviewed the technician and videotaped his facilities. A formal inspection, however, was not conducted, due to time constraints and other factors.

Statistical information is maintained to enable the staff and the Division Director to periodically assess the status of the inspection program. At the end of each calendar year, a listing is made of all licenses by inspection priority and category. The listing shows the date of last inspection and the date due for the next inspection.

#### 24. 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 initial inspections, should be no less than the NRC system.

### Assessment

Based upon discussions with staff, review of the RCP's inspection procedures, inspection schedules, and responses to NRC routine review questionnaire, it was determined that the inspection priority systems at both the DOH and the DEQ call for inspections at intervals at least as frequent as those required by the NRC inspection priority system. The DOH inspects more frequently than the NRC for several categories of licensees.

Inspections are generally unannounced. The inspection priorities are listed in a schedule and are updated as NRC Manual Chapter 2800 is modified. Inspection frequencies may be temporarily reduced or extended based on licensee performance, as allowed by NRC Manual Chapter 2800.

25. 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. For the inspection of complex licensed activities such as permanent low-level radioactive waste disposal facilities, a multidisciplinary team approach is desirable to assure a complete compliance assessment. 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.

Assessment

Based upon previous inspector accompaniments and an accompaniment of an inspector during this review, the reviewer determined that the Nebraska radioactive materials inspectors are competent to evaluate health and safety problems and to determine compliance with State regulations and requirements. Prior to receiving authorization to perform independent inspections, new inspection personnel are accompanied by the Division Director and the Section Manager.

An inspector was accompanied on an inspection of an R&D medical program during the review by the Region IV State Agreements Officer. The June 15, 1994, accompaniment was at Boys Town National Research Hospital (License No. 01-47-01). The inspector's performance was deemed to meet the guidelines for this indicator.

An inspection manual has been developed by a consultant outlining training and inspection activities required for inspectors in the program. Inspectors are accompanied by the Division Director or Section Manager at least annually.

26. 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.

## Assessment

A review of Nebraska's incident/event file (11 reported events between June 1992-June 1994) revealed that the agency was timely in responding to reported incidents/events and dispatched personnel as appropriate. Incident/event reports were comprehensive in scope and investigation findings were supported by backup documentation, when necessary. During the last year, eight incidents were reported and five of these incidents received on-site inspections. Incident details and response actions are discussed with the Regional State Agreements Officer in certain cases. Telephone inquiries are made to determine the need for an immediate onsite investigation. Medical consultants are available and used when necessary including medical consultation through NRC.

One incident occurred which involved equipment failure. A 200 liter pressurized bottle containing Kr-85 from Cryogenic Rare Gas Laboratories, Inc. developed a leak at the neck of the bottle during transport. South Carolina RCP personnel, the shipper (Cryogenics), and the carrier (Fed Ex) were notified.

Nebraska's response to actual and alleged incidents/events meets NRC guidelines in all areas.

## 27. 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.

### Assessment

A review of selected compliance files indicated that enforcement letters are written in appropriate regulatory language and properly referenced regulations and license conditions are included. Enforcement letters clearly specified violations and concerns and letters were usually issued within 30 days following inspections. Responses to enforcement letters are reviewed by the inspector and Program Manager.

Enforcement letters are reviewed by a program manager along with the inspection report and are signed by the Division Director. Generally, a 30-day period is specified for response from the licensee when they have any citations for violations. The licensee responses to enforcement letters are reviewed by the inspector and supervisor and they are acknowledged properly.

Management reviews compliance inspections, holds sessions with licensing and inspection personnel, and periodically accompanies inspectors on field inspections.

Although no escalated enforcement actions were initiated during the review period, the State does have all the necessary mechanisms for escalated enforcement, such as enforcement conferences, civil penalties, impounding of radioactive material, and license revocation or suspension.

## 28. 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 supervisors 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.

### Assessment

Nebraska DOH has improved the quality of its inspections by hiring additional staff, training, and the use of consultants. The State DOH hired a health physics consultant to prepare an Inspection Manual. This manual will be used as a guide and a training tool for all radioactive materials inspectors. It also includes seven Draft Inspection Report Forms. These will be used by all materials inspectors to perform inspections and document inspection findings while still in the field. The report forms address every type of inspection performed in Nebraska.

This will help the inspector organize thoughts and conduct an effective meeting with management at the end of an inspection. To obtain better quality enforcement correspondence, the DOH consultant is also preparing an Enforcement Manual. The manual will include a large number of boilerplate citations. These citations will be used by inspectors for preparing Notices of Violation and enforcement correspondence to licensees. The manual will set forth regulatory requirements pursuant to Title 180 and will show how each of the regulatory requirements has been violated. This manual will include sample enforcement letters that will be relevant to the various types of enforcement actions that can be carried out by the State.

The DEQ LLRW Program has not started any inspection activities since the LLRW facility is not operating yet.

## 29. 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's 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.

#### Assessment

For the DOH program, findings of inspections are documented satisfactorily in the inspection reports which also describe the scope of the inspections, as well as all noncompliance items and any health and safety matters. The reports reviewed (16 inspection reports) were comprehensive in scope, detailed in discussions of inspection findings, and included program areas that should be reviewed in detail at the next scheduled inspection. Nebraska's radioactive material inspection reports reviewed indicated that the reports meet NRC guidelines.

#### 30. 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 licensee's measurements. In States which regulate the disposal of low-level radioactive waste in permanent disposal facilities, access to testing should be available on an "as needed" basis for confirming licensees' and applicants' programs for measurements related to nonradiological aspects of facility operations such as soils and materials testing and environmental sampling and analysis to demonstrate compliance with 10 CFR Part 61 or compatible Agreement State regulations and ensure facility performance. Conditions for nonradiological testing should be prescribed in plans or procedures. 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  $\mu$ Ci/wipe
- Velometers
- Smoke Tubes
- Lapel Air Samplers

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 used for surveys and confirmatory measurements should be calibrated within the same interval as required of the licensee being inspected.

(Note: Additional types of instrumentation that are highly desirable are thin window plastic or NaI detectors for low energy gammas and "micro-R" meters with audio signal for searching for lost gamma emitter sources.)

### Assessment

Reviews of selected inspection reports and discussions with the staff indicated that the DOH policy for conducting independent measurements as part of the inspection is being followed. These include direct radiation readings and checks for contamination. Based upon the file review and discussions, the number and types of radiation surveys taken during inspections are adequate.

An inventory of the radiation survey instruments and laboratory equipment that is available to the staff is adequate for the scope of this agreement materials program.

The DOH program has a policy for calibration of all of the instruments used for radiation surveys. These instruments are calibrated at frequencies equivalent to those required for licensees.