



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

December 6, 1994

Dianne R. Nielson, Ph.D.
Executive Director
Utah Department of Environmental Quality
168 North 1950 West
P.O. Box 144810
Salt Lake City, UT 84114-4810

Dear Dr. Nielson:

This is to transmit the results of the NRC review and evaluation of the Utah radiation control program which was concluded on June 17, 1994. This review was conducted in conjunction with the pilot Integrated Materials Performance Evaluation Program (IMPEP) in which common performance indicators were used to evaluate both the NRC regional office and the Agreement State programs. The review was conducted by a team of NRC reviewers led by Kathleen Schneider, Senior Project Manager, Office of State Programs. This letter presents the results of the routine Agreement State review and should be considered as the findings of record for the review. The IMPEP pilot program review results will be presented in a separate document. The results of this review were discussed with you and your staff on June 17, 1994.

As a result of our review of your program and the routine exchange of information between the NRC and the State, we believe that the Utah program for regulating agreement materials is, at this time, adequate to protect the public health and safety and is compatible with the regulatory programs of the NRC.

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.

Enclosure 2 is a summary of the review findings where recommendations are made for improvements in the radiation control program. This enclosure contains documentation on: Scope of Review, Conclusion, Status of Program Related to Previous NRC Findings, Current Review Assessments and Recommendations, and Summary Discussions with State Representatives. Recommendations were made on 13 indicators; however, the findings that resulted in these recommendations are not considered significant enough to affect the findings of adequacy and compatibility. Please note that the regulations that will need to be adopted by the State to maintain compatibility, as identified under the Indicator "Status and Compatibility of Regulations," are indicated in this enclosure. We request specific written responses from the State on the recommendations in Enclosure 2 within 30 days of this letter. We recognize the delay in our issuance of this letter; if you require more than 30 days to respond, please inform us of your revised response date. Your reply should address those recommendations that the State has not previously addressed in correspondence

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Dianne R. Nielson

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with NRC since the review. However, references to other correspondence will be helpful.

Enclosure 3 presents a summary of the review findings where the State has adequately satisfied the indicator and there are no recommendations. A written response to the items in Enclosure 3 is not requested.

I appreciate the courtesy and cooperation extended by you and your staff to the NRC review team during the review.

Sincerely,

Richard L. Bangart

Richard L. Bangart, Director
Office of State Programs

Enclosures:
As stated

cc w/encs:
William Sinclair, Director
Division of Radiation Control
Utah Department of Environmental Quality

bbc w/encs:
The Chairman
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Distribution:

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FRoss, NMSS
JHornor, RIV/WCFO
IMPEP File
Utah File

DCD (SP01)

PDR (YES X NO)

*See previous concurrence.

OFC	OSP:SA	OSP:DD	RIV:RA	NMSS:D	OGC
NME	KSchneider:ks:kk	PLohaus	LJCallan	RBernero	FCameron
DTE	10/07/94*	10/11/94*	10/26/94*	10/18/94*	10/20/94*
OFC	OSP:D <i>RLB</i>	DEDS <i>HT</i>	EDG <i>JT</i>		
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IMPEP File	DCD (SP01)
Utah File	

Via telephone R. Doda for L. Callan

PDR (YES X NO)

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Utah File	PDR (YES <u>X</u> NO <u> </u>)

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NME	KSchneider:ks:kk	PLohaus	JMontgomery	RBernero	FCameron
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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 of improvement in particular program areas 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 UTAH
RADIATION CONTROL PROGRAM FOR THE PERIOD
APRIL 12, 1992 TO JUNE 13, 1994

SCOPE OF REVIEW

The sixth program review of the Utah Agreement State program was held during the period of June 13 - June 17, 1994 in Salt Lake City, Utah. The 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.

Utah is one of three States that volunteered to participate in the pilot Integrated Materials Performance Evaluation Program (IMPEP) in which common performance indicators were used to evaluate both the NRC regional office and the Agreement State programs. This review of the State's program was conducted in conjunction with the IMPEP review. The IMPEP review report, addressing only the common indicators, will be submitted in a separate report.

The NRC review team was led by Kathleen Schneider, Senior Project Manager, Office of State Programs, and consisted of George Pangburn, Section Leader, Scott Moore, Health Physicist, James Kennedy, Senior Project Manager, and Fred Ross, Senior Hydrogeologist, Office of Nuclear Material Safety and Safeguards (NMSS); and Jack Hornor, Region IV State Agreements Officer, Walnut Creek Field Office.

The State was represented by Dr. Dianne Nielson, Executive Director, Department of Environmental Quality (DEQ), William Sinclair, Director, Division of Radiation Control (DRC), Dane Finerfrock, DRC, and Craig Jones, DRC, and other members of the Utah DRC staff.

The review included the evaluation of program changes made in response to our previous review recommendations, review of the State's written procedures and policies, discussions with program management and staff, technical evaluation of selected license and compliance files, accompaniment of a State inspector, review of the State's incident and allegation files, and the evaluation of the State's responses to an NRC questionnaire that was sent to the State in preparation for the review. James Kennedy, Division of Waste Management, NMSS, assisted during the week with those portions of the review dealing with the low-level radioactive waste regulatory program. Fred Ross, Division of Waste Management, NMSS, reviewed and discussed outstanding issues from the previous review and letters on the Envirocare license with Utah staff on June 14-15, 1994.

A summary meeting to present the results of the review was held with Dr. Nielson on Friday, June 17, 1994.

CONCLUSION

The Utah program for agreement materials is adequate to protect public health and safety, and is compatible with NRC's regulatory program for similar materials.

STATUS OF PROGRAM RELATED TO PREVIOUS NRC FINDINGS

The results of the previous review were reported to the State in a letter to Kenneth Alkema, Executive Director, DEQ dated September 2, 1992. A review visit meeting was held with the State during the period of August 30-September 2, 1993. Additional open items were identified in our letters of June 28, 1993 concerning the land ownership exemption granted by the State to Envirocare, and March 31, 1994 identifying concerns with an amendment granted to Envirocare for disposal of certain long-lived, mobile radionuclides and the open items from the review visit. The current status of each finding is as follows:

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

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

Recommendation from the April 1992 Review

The review of the State's radiation control regulations disclosed that one regulation amendment, which is a matter of compatibility, had not been adopted by the State within a three-year period after adoption by the NRC. This amendment involved a decommissioning rule. In accordance with current NRC practice, if the State has initiated rulemaking on the decommissioning rule, and the rulemaking is on track at the time of the review, then the finding is of minor significance. We recommend this amendment, and any others approaching the three-year period allowed after NRC adoption, be promulgated as effective State radiation control regulations.

Current Status

The decommissioning rule became effective on August 2, 1993.

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

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

Recommendation from the April 1992 Review and August 1993 Review Visit

Comment - Land Ownership Exemption. We recommended that the rationale for extension of the exemption for the disposal of

byproduct, source and special nuclear material be documented and include how the performance objectives relating to long-term control, surveillance and maintenance would be met. This should include an analysis of the adequacy of the surety funds to cover such long-term control and discussion of the difference between 30 versus 100 years post-closure requirements. During this review, we obtained a draft of the State's rationale for land ownership exemption, and we recommended that this document be finalized and transmitted as soon as possible to the NRC for assessment.

We received the State's completed rationale for the land ownership exemption on May 28, 1992. The completed rationale is currently being reviewed in this Office; the Office of Nuclear Material Safety and Safeguards, Division of Low-Level Waste Management and Decommissioning; and the Office of General Counsel. Our assessment will be provided to you after we have completed our review.

By the time of the August 1993 review visit most of the issues associated with the land ownership exemption had been resolved and documented in various correspondence between NRC and Utah. The staff noted that the restrictive covenants on the use of the land after the site is closed were signed and recorded. The amount of surety was still under review by the State and resolution was expected shortly. The staff, in a letter dated December 24, 1992, identified a number of missing or incomplete items in the Trust Agreement. After the review described in the NRC letter of June 28, 1993, two open items remained: funding for markers and monuments during the passive institutional control period, and for routine maintenance after closure.

Current Status

On June 30, 1993, DEQ provided Restrictive Covenants virtually identical to those suggested by the staff in its letter to DEQ of June 28, 1993. We reviewed the signed covenants and verified that they are acceptable. With respect to the open items in the Trust Agreement (markers and custodial care), these have been addressed in the current Trust Agreement, dated January 13, 1994. Funds have been proposed by the licensee and the estimates have been approved as acceptable by the State. These amounts are listed in the Trust Agreement. The State conducts an annual review of the Trust Agreement to ensure that sufficient funds are available for the institutional control period.

On August 5, 1994, NRC staff sent a letter to Utah regarding liability associated with potential off-site releases from Envirocare as the landowner. The State responded September 6, 1994. This issue is being addressed separately from this review.

- B. The issue addressed in the following comment has been partially addressed, but can not be closed out at this time. NRC will continue to monitor Utah's actions.

Recommendation from the April 1992 Review and August 1993 Review Visit

Comment - Completion of Safety Evaluation Report. We recommend that the State provide documentation in their SER, Ground Water Discharge Permit Statement of Basis or other such document, how the site meets regulatory standards for the off-site release of radioactivity.

The follow-up review report also mentioned a telephone conference with Mr. Sinclair in which similar concerns were identified with Amendment 14 to the Envirocare license, which was granted after our review visit of August 30-September 2, 1993. This amendment authorized Envirocare to accept 14 additional radionuclides for disposal, including some which are highly mobile and long-lived. The additional concerns from the telephone conference were subsequently documented in NRC's letter to the State dated March 31, 1994 and are similar to the original concerns.

Current Status

The Utah State Division of Water Quality (DWQ) is in the process of revising the Ground Water Quality Discharge Permit for the Envirocare Low-Level Radioactive Waste Disposal Facility. As part of the Statement of Basis for the revised ground water quality discharge permit, the DWQ plans to provide documentation on the conclusion reached that the site meets regulatory standards. The basis will conclude that because of the high total dissolved solids content of the shallow ground water at the Envirocare facility, the ground water pathway would not be considered as a realistic pathway in a pathway dose assessment required by 10 CFR Part 61. The ground water quality at the facility is being protected under Utah ground water quality protection regulations in that for a five hundred year period the ground water pathway will contribute less than four millirem per year at any ground water monitoring well. The revised draft permit is expected to be issued for public comment within the next 3 months. NRC requested that Utah transmit a copy of the draft permit for comment to NRC at the beginning of the public comment period.

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

Recommendation from the April 1992 Review

Comment - Operating Procedures. NRC recommends that an updated and controlled copy of the disposal operating procedures, including

administrative, quality assurance, radiation protection, and laboratory procedures, be provided by the licensee, and maintained at one of the State locations.

Current Status

During the 1993 review visit it was noted that a controlled copy of the procedures has been provided by Envirocare and is located in the Division offices.

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

Recommendation from the April 1992 Review

Comment - Averaging of Waste Concentration. We recommend that the State formalize their policy on concentration averaging and coordinate this policy with NRC draft guidance which has been coordinated with the Conference of Radiation Control Program Directors, Inc. (CRCPD). The State should verify that the licensee's procedure for determining the concentrations of radionuclides in bulk shipments is consistent with State policy. The procedures should cover methods for establishing a conservative assumed density for incoming shipments of unknown density, for waste classification purposes.

Current Status

In this review, the staff verified that both the DRC policy and Envirocare's procedures were consistent with NRC guidance on waste averaging.

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

Recommendation from the April 1992 Review

Comment - Placement of Waste. We recommend that DRC request the licensee to make an assessment of good construction practices, and make the necessary changes in the quality assurance/quality control (QA/QC) plan and field operations.

Current Status

During the 1993 review visit it was noted that Envirocare had reviewed the concerns and revised the procedure and the QA/QC procedure.

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

Recommendation from the April 1992 Review

Comment - Definition of "Lift." We recommend that DRC request the licensee to define the term "lift" in the QA/QC Plan in terms of surface area of placed embankment material.

Current Status

During the 1993 review visit it was noted that Envirocare had adopted the definition for "lift."

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

Recommendation from the April 1992 Review

Comment - Leachate Collection System. We recommend that the State evaluate the installed limited leachate collection system with a view toward requiring the licensee to seal the pipe with bentonite/cement and cutting the pipe off to avoid penetration of the radon barrier layer.

Current Status

During the 1993 review visit, DRC investigated and determined that the system was installed without approval. The licensee has been directed to cut off the system below the radon barrier and to cover the stubs. This action was completed by the licensee September 3, 1993.

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

Recommendation from the April 1992 Review

Comment - Engineering Inspection During Construction. We understand the DRC is actively recruiting for a staff engineer at the present time to provide this oversight at the construction of the low-level waste (LLW) cells. We recommend this staff position be filled at the earliest practical time.

Current Status

A staff member with an M.S. in Civil Engineering and P.E. has been hired and is spending approximately 75% of his time in the low-level waste program.

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

Recommendation from the April 1992 Review and August 1993 Review Visit

Comment - Hydraulic Conductivity of Clay Liner. We recommend that DRC request the licensee to perform an assessment of the long-term stability of the treated clay soils under anticipated waste disposal environmental conditions (e.g., leachate from placed waste), to demonstrate the long-term performance and engineering properties of the clay liner material.

Current Status

We examined DRC File No. 722 "Liner Long-term Stability" containing Envirocare's engineering reports on liner long-term stability and the DRC assessments of Envirocare's submittals. The DRC has determined that the revised engineering report submitted by Envirocare adequately addresses DRC concerns about clay liner stability with respect to the longevity of the sodium triphosphate additive used to decrease liner permeability in order to meet the objectives of the water quality standards required by the Ground Water Quality Discharge Permit. In addition, DWQ requires that Envirocare demonstrate that waste leachate will not adversely react with the carbonate in the clay liner to increase liner permeability.

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

Recommendation from the March 31, 1994 letter

Comment - Disposal of Heavy Metals in LLW Cell. It is unclear in the documents that NRC staff was provided, as to whether or not the amended Ground Water Quality Discharge Permit only pertains to previously disposed hazardous waste, or whether it would allow additional amounts of heavy metals to be disposed in the low-level waste embankment. The wording allows the interpretation that the amended Ground Water Quality Discharge Permit would allow continued disposal of heavy metals in the low-level waste facility. In addition, the State acceptance of the mixed waste at the low-level waste facility appears to be based on the similarity of the waste to uranium mill tailings. The NRC does not accept the application of regulations that were specifically promulgated for mill tailings disposal to be applicable for disposal of hazardous waste on the grounds that the hazardous waste has similarities to mill tailings.

Current Status

The State of Utah permits the disposal of radioactive wastes which

may contain kinds and amounts of heavy metals that are exempt or below the regulatory threshold of the Environmental Protection Agency (EPA) Resource and Conservation Recovery Act (RCRA) regulatory program in the low-level waste disposal cells instead of the mixed waste cell. Heavy metal contaminated wastes regulated by the EPA RCRA program are disposed exclusively in the mixed waste disposal cell. Certain other wastes exempted from the RCRA regulations may be disposed of in the low-level waste cell, however maximum heavy metal concentration limits in waste disposed in the low-level waste cell have been imposed by the State after a contaminant transport assessment conducted by the State. The assessment utilized State ground water quality standards for heavy metals as part of the performance criteria. The State of Utah has a waste characterization plan which is imposed on the licensee, Envirocare. This plan requires the licensee to sample and analyze incoming waste shipments for both radiological and non-radiological contaminants. The EPA RCRA regulatory program requires that the generator of the waste determine if the waste should be classified as hazardous.

- K. The issue addressed in the following comment has not yet been satisfactorily resolved and is considered open.

Recommendation from the March 31, 1994 letter

Comment - Air Pathways Analysis. The State analysis (for the added 14 radionuclides) discusses air pathway releases of Pu but does not address other potentially significant nuclides such as C-14 or tritium. The State may have additional documentation concerning pathways analysis for these radionuclides that staff has not had an opportunity to review. Staff experience to date both in their own performance assessment efforts and in similar efforts by the Department of Energy for their facilities, has indicated a need to specifically evaluate C-14 in the air pathways analysis.

Current Status

This item was first identified to the State of Utah in the March 31, 1994 letter which included comments on amendment 14 for the additional 14 radionuclides. The reviewers discussed the comment after consultation with NRC staff in the Division of Waste Management on June 16, 1994 since the State had not taken any action to address this issue because of their uncertainty about the comment. The Office of State Programs arranged a telephone conference with the cognizant individuals from the NRC and Utah on October 6, 1994 to conclude discussions on this issue. The reviewers recommended that the State of Utah require Envirocare to include C-14 and tritium in their analysis of airborne pathway releases from the Envirocare facility.

CURRENT REVIEW ASSESSMENTS AND RECOMMENDATIONS

All 30 indicators were reviewed and the State fully satisfies 18 of these indicators. Recommendations were made on 12 indicators; however, the findings that resulted in these recommendations are not considered significant enough to affect the findings of adequacy and compatibility. The State did meet the indicator for staffing level, however, a recommendation was offered for the State to fill its existing vacancy and is included below. A questionnaire containing the 30 indicators with specific questions addressing each indicator was sent to the State prior to the review. The assessments and recommendations below are based upon the evaluation of the State's written responses 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, and inspector accompaniments. Specific assessments and recommendations are as follows:

1. Legal Authority¹ (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.

Assessment

Changes have occurred in the original enabling legislation since Utah became an Agreement State in 1984. The Title 19, Chapter 3, was amended in 1992 which put in place a Radiation Control Board comparable to boards established for the other divisions within DEQ. An additional amendment to the law became effective May 1994 which further delineated the duties and responsibilities of the Radiation Control Board. The Board is vested with the responsibility for the program, with the Executive Secretary, who is the Director, DRC, carrying out the day-to-day responsibilities.

The Board presently has four licensees as members of the 11 member board. The reviewers discussed with the staff the existing procedures for handling conflicts of interest, interviewed the Assistant Attorney General knowledgeable on State ethics laws and requirements for the various division boards, and examined meeting minutes for the Radiation Control Board.

Presently, members of the Radiation Control Board will recuse themselves from voting on issues that create a personal conflict of interest. However, the members are not required to recuse themselves from the discussion on the particular item or issue that creates a conflict of interest for them. This

¹The guideline statements are a summary of the guideline provisions provided in the May 28, 1992 policy statement, "Guidelines for NRC Review of Agreement State Radiation Control Programs."

is not the practice or policy for other division boards within DEQ.

Recommendation

We recommend that the Radiation Control Board consider establishing a written policy for conflicts of interest consistent with other division boards within DEQ. If appropriate, the policy should be coordinated with the Attorney General's Office.

2. Status and Compatibility of Regulations (Category I)

NRC Guidelines

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 after the effective date.

Assessment

The State was provided a chronology of regulation amendments that are needed for compatibility for comparison with the Utah regulations that have been adopted. This chronology was compared with the regulations, and the amendments that were adopted by the State since the last (April 1992) review were assessed for compatibility.

The State's regulations are compatible with the NRC regulations up to and including the "Notifications of Incidents", 10 CFR Part 20, 30, 31, 34, 39, 40 and 70 amendments (56 FR 64980) which became effective October 15, 1991. Also, the State has adopted the 10 CFR Part 20 Revisions - "Standards for Protection Against Radiation" (56 FR 23360) which became effective on June 20, 1991. This regulation is presently under review by NRC.

The "Quality Management Program and Misadministrations", 10 CFR Part 35 amendment (56 FR 34104) that became effective on January 27, 1992 is being prepared by staff for submission to the Radiation Control Board for rulemaking.

In discussions with the staff, several rules have recently been issued with a delay in implementation dates. This included a delay in the implementation of the ALARA provisions of the revised Part 20 and decommissioning requirements until January 1, 1995. In addition, the implementation date for the requirements for purchasing alarming dosimeters for radiographers was 6 months after the effective date of the rule. The draft Quality Management rule submitted to the NRC for review also has a proposed delayed implementation. Presently, Utah adopts rules to meet the three-year period designated by NRC but, in certain instances, the State has delayed the implementation date for up to an additional year.

In addition, we would like to bring to the State's attention other regulations that will be needed for compatibility. These rules are:

- "Licenses and Radiation Safety Requirements for Irradiators", 10 CFR Part 36 (58 FR 7715) that became effective on July 31, 1993 and will need to be adopted by July 31, 1996.
- "Licensing Requirements for Land Disposal of Radioactive Waste," 10 CFR Part 61 amendment (58 FR 33886) that became effective on July 22, 1993 and will need to be adopted by July 22, 1996.
- "Decommissioning Recordkeeping, and License Termination: Documentation Additions," 10 CFR Parts 30, 40, and 70 amendments (58 FR 39628) that became effective on October 25, 1993 and will need to be adopted by October 25, 1996.
- "Self-Guarantee as an Additional Financial Mechanism," 10 CFR Parts 30, 40, and 70 amendments (58 FR 68726) that became effective on January 28, 1994 and will need to be adopted by January 28, 1997.

Recommendation

We recommend that the State of Utah review the problems that caused the State to adopt a delayed implementation approach and to take actions for future rulemaking so that the State of Utah can implement promulgated regulations without delay.

3. Contractual Assistance (Category II)

NRC Guidelines

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 radiation control program (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

The DRC has procedures in place for obtaining contractual assistance and the DRC has received assistance from other Utah Departments and the university system in support of their low-level radioactive waste regulatory oversight of the Envirocare license. However, there are no procedures in place to avoid the selection of contractors associated with the development or operation of a low-level radioactive waste disposal facility.

Recommendation

We recommend that procedures be developed and implemented by DRC in the selection of contractors to support the low-level radioactive waste regulatory program to avoid conflict of interest with regard to those contractors working or supporting the licensee.

4. 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, inspection, and enforcement.

Assessment

In its response to the questionnaire, the DRC indicated that it had made minor revisions to written procedures on internal processing of licensing applications, inspection policies, decommissioning and license termination, fee collection, contact with media, and exchange of information procedures to reflect organizational changes within the Division and that it had implemented a revised Administrative Policy Document which addressed these items. The team noted that the procedures are still being revised to reflect the current organizational structure. However, the manager for materials licensing and x-ray indicated that they reflect the current Division practice.

Recommendation

To assure continuity and uniformity in regulatory practice, we recommend that the DRC take the necessary steps to complete its revision of these procedures and provide them to all employees.

5. Staffing Level (Category II)NRC Guidelines

Professional staffing level should be approximately 1 to 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.

Assessment

DRC has 3.6 FTE dedicated to the radioactive materials program. With a total of 233 licenses, the DRC's ratio of FTE/100 licenses is 1.6, which slightly exceeds the NRC-recommended ratio of 1.0 to 1.5. The State fully satisfies this indicator. However, in its response to the questionnaire, DRC indicated that staffing levels do not appear to be adequate with respect to the inspection of agreement materials. DRC noted in its questionnaire response that it has a vacant position (Environmental Specialist III) which has not been filled and is not likely to be filled in the near future, due to budget constraints. While the review team supports the addition of another staff position to strengthen the Utah program, the team also noted that no licensing or inspection backlog exists.

DRC has 2.9 FTE dedicated to the low-level waste program as compared to the recommended baseline staff effort of 3-4 professional technical person-years. DRC receives additional support from other Divisions or can obtain contractual support if necessary, and fully satisfies this indicator with regard to the low-level waste program with these additional resources available. DRC noted in its response to the questionnaire that staffing levels do not appear to be adequate with respect to oversight of the Envirocare facility. However, DRC has a funded vacancy which is expected to be posted in the next few months and should alleviate their concern in this area.

Recommendation

It would be desirable for DRC to take the necessary steps to fund and fill the vacant Environmental Scientist III position within the materials program and the funded vacancy in the low-level waste program to assure that adequate levels of support remain available.

6. Technical Quality of Licensing Actions (Category I)

NRC Guidelines

The RCP should assure that essential elements of applications meet current regulatory guidance for describing the isotopes and quantities to be used, qualifications of users and operating and emergency procedures sufficient to establish the basis for licensing actions. Licensing activities should be adequately documented, and licenses should be clear, complete, and accurate as to isotopes, forms, quantities, authorized uses, and permissive or restrictive conditions.

Assessment

Thirteen files were selected for in-depth casework review. The State has 223 specific licenses, of which 15 are considered major licenses by NRC definition. Eight of the major licenses incurred licensing actions during the review period and were included in the casework review. The review, which covered casework handled by each State reviewer, included the following types

of actions and types of licenses: one new license, four renewals, five major amendments and three license terminations; three medical, one broad academic, three broad industrial, one waste broker, one manufacturer, two multiple fixed gauges, one irradiator and one secondary circuit for uranium recovery.

Although some minor comments were made relating to licensing procedures, there were no health and safety issues or significant comments, and the technical quality of the licensing actions is adequate to meet the NRC guidelines.

In reviewing Utah's low-level radioactive waste program, the reviewers focused on items open from the last review, as identified in the September 2, 1992 letter, additional open items identified in the June 28, 1993 letter concerning the land ownership exemption granted by the State to Envirocare, and the March 31, 1994 letter identifying concerns with an amendment granted to Envirocare for disposal of certain long-lived, mobile radionuclides. The review team also examined licensing and inspection activities performed by DRC in the last year in regulating the disposal facility licensee. In addition to amendment 14 for long-lived radionuclides, which was reviewed in detail in late 1993 and early 1994 at NRC Headquarters, with comments documented in a letter to Utah dated March 31, 1994, the reviewers also examined the basis for amendment 15 for 23 additional radionuclides. Two issues remain open, the completion of the safety evaluation report and additional pathway analysis for C-14 in connection to the recent amendment, as discussed in the status of previous NRC findings, item 2.B and 2.K.

Recommendation

The State analysis (for the added 14 radionuclides) discusses air pathway releases of Pu but does not address other potentially significant nuclides such as C-14 or tritium. The reviewers discussed the comment with the Manager, Environmental Monitoring and Radiological Waste group, after consultation with NRC staff in the Division of Waste Management. We recommend that the State of Utah require Envirocare to include C-14 and tritium in their analysis of airborne pathway releases from the Envirocare facility. The Office of State Programs arranged a telephone conference with the cognizant individuals from the NRC and Utah on October 6, 1994 to conclude discussions on this issue.

7. Licensing Procedures (Category II)

NRC Guidelines

The RCP should have internal licensing guides, checklists, and procedures consistent with current NRC practice. 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

Currently the program's licensing procedures do not satisfy the guidelines because they do not use checklists. From the review of licensing files, guidance documents and staff discussions, the review team determined that the State has available to the staff most NRC Policy and Guidance Directives and Regulatory Guides, along with some internal memoranda and Utah regulatory guides. Although the licenses were technically correct, six comments made during the file reviews related to discrepancies that would have been avoided by the use of checklists and model licenses. The State has received the generic procedures developed by the Conference of Radiation Control Program Directors, Inc. (CRCPD), but has not modified them for their own use.

In addition, license fees are tied to an outdated license category list. For example, industrial broadscope licenses are listed as academic broadscope because there is no industrial category. Although the staff understands the difference, license files are legal records and should include correct information.

Supervisory review and final dispatch records are not kept in the license file. Although the information is available elsewhere, it would be beneficial to retain all supporting documents in the file for future review.

The State has begun to establish standardized computer files in support of the licensing program. Several standard license conditions are already available for the reviewer's use, and there are plans to standardize and computerize the issuance of licenses.

Recommendation

For consistency and uniformity in the licensing process, we recommend the State develop and implement new license procedures, including checklists and model licenses. The review team provided the staff with sample checklists and model licenses as well as the latest versions of the NRC Policy and Guidance Directives, and we recommend these or similar guidance documents as developed by the CRCPD be adopted for use by the Utah licensing program. We also suggest a routing sheet which includes supervisory review and dispatch records, be retained in the license file.

8. 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. When backlogs occur, management should develop and implement a plan to reduce the backlog.

Assessment

Based on the DRC response to the questionnaire as well as independent confirmation, the review team determined that DRC had no overdue inspections as defined in NRC Inspection Manual Chapter 2800. The Support Services Coordinator develops a semiannual listing of inspections due which are then apportioned between the inspectors. The computer tracking system allows the Coordinator as well as program management to routinely assess the status of the materials inspection program.

However, DRC should review their list and make minor changes to some of the data due to minor errors in the list of inspection frequencies. In two cases, the list provides the wrong corresponding NRC program code (6-a, Nuclear Laundry should be program code 3218; 7-b.3, Medical Institution [Other] should be program code 2120), and in another case, the inspection frequency is not stated clearly (3-f, Irradiators [exposed], 1 year & 6 months).

The review team also examined DRC's inspection of new licensees, which are to be inspected within 6 months of license issuance. Of 28 new licenses issued through November 1993, only nine had been inspected within 6 months of license issuance. In addition, three of these 28 had not been inspected at the time of the review, although these were generally low priority licensees in terms of inspection.

DRC's inspection program for the low-level waste facility in the last year consisted of two primary parts--routine inspections conducted by individual inspectors of ongoing activities at the site, and a multidisciplinary team inspection. For the routine inspections, inspectors have checklists which identify potential areas to examine during their visit. Inspectors cover the activities that are ongoing at the time of the visit and write up their findings in the field notes, which are kept on file at DRC. All areas are covered in the field notes. The staff examined the file and the routine inspection program is adequately comprehensive in its coverage of licensee activities.

Routine inspections by DRC personnel achieve approximately 60% coverage of the days that the disposal site is operating. Last year, a multidisciplinary team review of 4 days duration was conducted at Envirocare.

Recommendation

We recommend DRC review their inspection priority list and make minor changes to some of the data. DRC should inspect the three licensees who had not been inspected as of the time of the review and should provide greater attention to assuring that new licensees are inspected within 6 months of license issuance.

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

NRC Guidelines

Inquiries should be promptly made to evaluate the need for on-site investigations. 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.

Assessment

The team reviewed the responses to the questionnaire regarding allegations and incidents, examined one allegation file and six incident report files, and interviewed several of the technical staff.

Prior to the review, the team obtained the 1992 and 1993 Program Statistics submitted to the Office of State Programs and copies of the February 3, 1994 summary of information on radioactive material incidents in Utah for calendar year 1993. For 1992, the DRC had reported 15 incidents of which three were provided to NRC under the NRC-Agreement State exchange of information provisions. Of that 15, five involved naturally occurring radioactive material (NORM), four were investigated on-site by DRC, and four were considered misadministrations in accordance with the 1987 revision to Part 35. For 1993, DRC reported eight incidents of which three on-site investigations were conducted. None of these incidents were considered Abnormal Occurrences. Although five medical misadministrations were reported to the State, none of the five meet the present misadministration criteria contained in 10 CFR 35.2 as revised January 27, 1992. Presently DRC is investigating and evaluating one misadministration that may be an Abnormal Occurrence.

Allegations and incidents are in separate files with reference material contained in the license files. Incidents and medical misadministrations reports are handled by the staff and coordinated with the managers.

One allegation referred by NRC was reviewed and it was appropriately handled and closed with correspondence to NRC regarding the State's finding.

Six incident files were selected for in-depth review. The six cases reviewed were a range of incidents both significant and insignificant from a health and safety standpoint. Most actions taken were appropriate, well-coordinated and timely. Corrective actions were adequately identified to licensees and appropriate follow-up measures were taken. However, in two of the incidents concerning the same license, DRC did not conduct an on-site inspection or investigation as NRC would under the same circumstances. DRC believed that due to the communication between DRC and the licensee during the incident, the licensee's compliance history, consultant hired and the location of the licensee within the State, that it was not necessary to conduct on-site activities. Both incidents involved damage to gauges.

Recommendation

We recommend that even if DRC does not immediately respond to every reported incident, those licensees where there is damage to devices containing radioactive material and equipment where there is a potential for significant exposures to workers or the public, should be inspected to investigate circumstances and examine corrective action to prevent recurrence.

10. Enforcement Procedures (Category I)

NRC Guidelines

Enforcement Procedures should be sufficient to provide a substantial deterrent to licensee noncompliance with regulatory requirements. Written procedures should exist for handling escalated enforcement cases of varying degrees.

Assessment

The review team examined DRC's regulations for enforcement as well as their internal enforcement guide, which contains procedures for handling both escalated and non-escalated enforcement cases. The regulations and procedures are similar to those used by NRC and provide for violations to be classified as Severity Levels I-V. The DRC has ability to issue civil penalties and takes into account the same general factors as NRC in mitigation of civil penalties (i.e., discovery and identification, corrective action, past performance, prior notice of similar events, multiple occurrences and duration).

The review team noted that the Enforcement Guide is dated February 1991 and is based on the organizational structure that predates development of the Department of Environmental Quality. As noted in the section above on Administrative Procedures, DRC should complete its revision of administrative procedures, which includes enforcement procedures.

During the review period, DRC issued 20 civil penalties and eight orders. The reviewer examined eight inspection cases during this review. Five of those eight had letters issued within 30 days of the inspection providing the inspection results to the licensee. The other three had letters that were issued from one-half week to two-and-a-half weeks beyond the 30 day goal. Letters and attached notices of violation (NOVs) were generally clear and properly worded.

Of the eight inspection cases reviewed, the reviewer identified two cases where DRC staff determined that the licensee's response to a violation was inadequate. In their reply letter to the licensee, DRC summarized the licensee's response and then provided a brief description of DRC's position. On these two cases, no further written follow-up was asked for or expected from the licensee to their previous inadequate response. When asked why no further action was taken with these two licensees regarding their inadequate responses, the inspector explained that each licensee's follow-up would be

examined during the next routine inspection. If the licensee did not successfully resolve the violation, as determined during the next inspection, then the licensee would be cited again for the violation. The review team determined that Utah's practice regarding inadequate licensee response to an NOV was sufficient to satisfy this indicator but observed that in some cases licensees may continue to operate in violation of certain requirements until the next inspection.

In two of the eight inspection cases reviewed, the reviewer found that DRC had cited licensees with numerous violations. In one case, the licensee was cited with 17 specific violations (grouped into five violations) of severity levels ranging from III to V. In this case, DRC issued an NOV requiring a licensee response. The State did not address the possibility of licensee management breakdown. In the other case, the licensee was cited for 12 violations of minor severity (severity level IV and V). DRC issued an NOV requiring a licensee response. The State considered the need for escalated enforcement in these two cases, but believed it was unnecessary, based on the licensees' compliance history and responsiveness in addressing the inspection findings.

Recommendations

1. When a licensee response to an NOV is inadequate, we recommend that DRC require a further, satisfactory response from the licensee that provides an explanation of the licensee's corrective actions. If the licensee will not provide a satisfactory response, disputes the violation, or refuses to adequately address the violation, then DRC should take further action, as appropriate (to include DRC management contact with the licensee, confirmatory action letters, or orders).
 2. In inspections that result in numerous violations, we recommend that DRC should address the issue of management breakdown in management meetings with the licensee and subsequent enforcement actions.
11. Inspection Procedures (Category II)

NRC Guidelines

Inspection procedures and 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.

Assessment

The reviewer determined through discussions with staff, an accompaniment of a State inspector, review of compliance files, and an examination of Utah's response to the questionnaire that DRC has inspection procedures and that they are used by the inspectors. Both of the materials inspectors are familiar with NRC procedures and guidance in conducting inspections and have attended the Office of State Programs' sponsored Inspection Procedures Course. The reviewer determined that DRC utilizes the inspection guidance provided by NRC

in Inspection Manual Chapter 2800 and Inspection Procedure (IP) 87100, and left an updated version of IP 87100 with DRC during the review. Although DRC has inspection guidance in place for conducting the inspection, DRC has no procedures on documenting the inspection results. Specifically, DRC has no equivalent to Inspection Manual Chapter 0610, "Inspection Reports."

Through discussions with staff and during an accompaniment of a State inspector, the reviewer determined that DRC has no requirement for inspectors to formally debrief DRC management upon return from inspection trips. It appears that debriefings occur informally, especially when there is a major finding, but the reviewer could not identify any written requirement for supervisors to meet with staff at the conclusion of an inspection trip. Since there was no written procedure for these debriefings, there was no standardized time period for the informally briefings that did occur. The review team concluded that oral debriefings of the inspectors' supervisor are needed, at a minimum, when inspectors return from inspection trips that identified any significant violations.

Recommendations

1. We recommend that DRC should develop a formal inspection procedure on documenting inspections.
2. We recommend that DRC inspectors orally debrief their supervisor upon returning from an inspection that has any significant violations.
12. Inspection Reports (Category II)

NRC Guidelines

Inspection 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 also show the status of previous noncompliance and the independent physical measurements made by the inspector.

Assessment

Eight inspection reports were selected for the casework review. The cases reviewed included reports from both materials inspectors. The cases reviewed consisted of one irradiator (exposed), an academic, Type A license, an industrial radiography license, a fixed gauge license, a portable gauge license, a medical institution (other), a mobile medical license (although the field notes did not contain specific information regarding the licensee's mobile medical operations, so the licensee may have been mis-categorized by DRC), and a well logger. All of the reports consisted of the inspectors' written comments on inspection field notes. Documentation of independent measurements made by the inspectors was included in the inspection reports.

The reviewer noted that the inspection field notes (i.e., the checklist the

inspector uses to document an inspection) do not sufficiently document many parts of the inspection and the depth of the inspection. The accompaniment showed that inspectors are conducting thorough inspections, but the inspection field notes do not adequately describe the extent of the inspection. Observations of licensee operations and demonstrations, in particular, are not covered well by the existing field notes. For instance, one inspection of a medical licensee showed that the licensee was performing bioassays, but contained no further information on how the bioassays were performed. On an inspection of a portable gauge licensee, the field notes had no indication that the inspector observed licensee operations or demonstrations of use of the gauge, surveys, leak tests, and so on. On an inspection of an industrial radiographer, the field notes did not indicate that the inspector examined the licensee's equipment or had the licensee demonstrate what they looked for when they selected radiography equipment to use. The reviewer concluded that the inspection field notes should be expanded to include more depth on the existing items and a broader number of issues. During interviews with the inspectors, the reviewer was informed that DRC has a current initiative to update the field notes over the next year. The reviewer left a copy of NRC's latest inspection field notes with DRC.

Of the eight inspection reports reviewed, the inspection supervisor had signed off on five reports. Three reports had no signature on the cover page of the field notes indicating supervisory approval.

Isolated comments were developed from the casework reviews, and these comments were not indicative of any generic issues or problems, beyond those explained above. The reviewer's comments were discussed with the technical staff at the conclusion of the review.

In support of the low-level radioactive waste program, DRC conducted a multidisciplinary team inspection of Envirocare between October 18 and October 22, 1993. Three health physicists, one civil engineer, and a hydrologist were on the team. The scope of the inspection included compliance with the regulations and with the license conditions, including the Ground Water Discharge Permit. Twelve violations were found, which were transmitted to Envirocare in an inspection report dated November 17, 1993.

In this review, NRC staff examined the field notes used to inspect the Envirocare facility. Extensive checklists and notes had been prepared beforehand and listed the license condition or other area to be inspected. Notes taken in the field documented whether the requirement was being met. The reviewer selected several random requirements from the license and from the application and found that they had been inspected as part of this team review.

Recommendations

1. We recommend that DRC should revise the inspection field notes to cover the inspection results in more detail, and especially to better document the inspector's observations of licensee operations and demonstrations.

2. We recommend that DRC improve the procedure for documenting the inspection supervisor's review and sign off of inspection reports (field notes) before issuing the licensee a letter documenting the inspection.
13. 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.

Assessment

The inspection reports were reviewed for documentation concerning confirmatory measurements and independent measurements. It was determined that inspectors were performing sufficient confirmatory measurements and documenting them in most cases.

The reviewers discussed the equipment calibration procedures with inspectors and other technical staff. It was determined that survey meters are being calibrated on an annual frequency by DRC. The reviewers noted that certain types of licensees require calibration of their survey meters on a more frequent basis. For instance, radiographers must calibrate their survey meters at least quarterly. The reviewers concluded that DRC was not calibrating its instrumentation as frequently as some types of licensees.

The DRC staff informed the reviewers that inspectors were personally responsible for determining instrument efficiency for detecting applicable nuclides before each inspection. Interviews with inspectors confirmed that they knew of this responsibility. An inspector demonstrated for the reviewers the proper procedure for determining detector efficiency for carbon-14 using a survey meter with a pancake probe.

Recommendations

We recommend that DRC calibrate all survey instrumentation at a frequency at or more frequent than that required of the licensee being inspected, or only use instruments on inspections that have been calibrated within the standards applicable to the licensee. For instance, survey meters used on inspections of radiographers should be calibrated within the past 3 months, and pocket dosimeters used on inspections of radiographers should be checked for correct response to radiation at least once each year.

SUMMARY DISCUSSION WITH STATE REPRESENTATIVES

A summary meeting to present the results of the regulatory program review was held on Friday, June 17, 1994, with Dr. Dianne Nielson, and William Sinclair and the review team. The meeting was also attended by Paul H. Lohaus, Deputy Director, Office of State Programs. Utah staff disagreed with the comments

made on enforcement procedures, allegations and incidents and confirmatory measurements and the review team discussed with Dr. Nielson those recommendations where NRC and the State disagreed.

Due to the number of comments and recommendations in 13 of the indicators, the review team did not make any recommendation to the State at the time of the summary meeting as to the findings for the program.

The State was thanked for participating in the IMPEP pilot program. The common performance indicators concept and the IMPEP review process were explained, and the differences between the current and IMPEP reviews were discussed. The State was advised they would be asked to comment on the draft version of the IMPEP report before the final version is presented to the Management Review Board (MRB). They were also told a representative will be invited to attend that presentation.

Dr. Nielson was informed that the results of the review would be reported in a letter from Richard L. Bangart, Director, Office of State Program.

SUMMARY OF ASSESSMENT OF INDICATORS ADEQUATELY SATISFIED BY THE UTAH
RADIATION CONTROL PROGRAM FOR THE PERIOD
APRIL 12, 1992 TO JUNE 13, 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, license and inspection casework file reviews, and inspector accompaniments. The State fully satisfies the following indicators:

1. Location of the Radiation Control Program within the State Organization (Category II)

NRC Guidelines¹

The radiation control program (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.

Assessment

The Division of Radiation Control (DRC) is located in the Department of Environmental Quality (DEQ), the Executive Director of which is appointed by and reports directly to the Governor. Within DEQ, DRC is one of six departments that report to the Executive Director, DEQ, and which have similar health and safety missions (air quality, water quality, solid and hazardous waste management, etc.). This location and reporting relationship provides adequate access to appropriate levels of State management for the radiation control program.

2. 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.

Assessment

The DRC is organized in a manner which reflects the major program functions, given the relatively small size of the program. The Director has organized DRC into two groups: the Environmental Monitoring and Radiological Waste in one; and Material Licensing and X-Ray in another. Each of the two groups is headed by a Manager who reports directly to the Director. Lines of supervision from the Director to the Managers are clear and specific to

¹The guideline statements are a summary of the guideline provisions provided in the May 28, 1992 policy statement, "Guidelines for NRC Review of Agreement State Radiation Control Programs."

provide execution of program policy.

It should be noted that the Director, DRC, serves in two capacities. In one, as the Director, DRC, he reports to the Executive Director, DEQ. In this capacity, he signs out correspondence setting general Division policy or procedures or committing Division resources or budget. In the other capacity, he serves as Executive Secretary of the Radiation Control Board (RCB), and signs out correspondence relating to: Division policy relating to licensing actions and inspections; exemptions to the Utah Radiation Control Rules; inspection letters and NOV's; the Radiation Control Board; and legal interpretations. The statute establishing DEQ and the RCB (Title 19, Utah Code Annotated) differentiate the powers of the Executive Director, DEQ and the RCB sufficiently to assure that a potential conflict does not exist.

3. 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 upon the State's response to the questionnaire and discussions with staff, legal assistance to the DRC is adequate. During the review period, the DRC utilized legal assistance as needed for enforcement cases, contesting actions taken by Federal agencies and review of proposed changes to regulations. The Attorney General's Office, Environment Division, has two attorneys who provide support to the DRC as well as to the Radiation Control Board. DRC indicated that legal support to the program was timely and thorough.

4. 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.

Assessment

At the present time, Utah does not have technical advisory committees other than the Radiation Control Board discussed above.

5. Quality of Emergency Planning (Category I)NRC Guidelines

The RCP should have a written plan to respond to incidents involving radioactive materials. The plan should define the responsibilities and actions to be taken by State agencies, and should be distributed to all appropriate parties. Emergency communication procedures should be adequately established with other local, county, and State agencies. The plan should be reviewed annually and periodic drills should be performed to test the plan. NRC should be provided the opportunity to comment on the plan while in draft form.

Assessment

The DRC has a written emergency response plan for all types of incidents. The plan has been reviewed by the NRC and other State and local agencies integrally involved in the plan. There is a cover memorandum signed by the Governor which approves the plan and provides authority to the DRC to implement the plan. The Utah Department of Public Safety, which includes the Utah Highway Patrol (UHP) and the State Duty Officer, is named as first responder. This group includes the State Hazmat Section teams. These teams are trained by and work closely with the DRC. The plan is reviewed annually and updated as necessary.

Officer William Todd of the UHP Hazmat team explained during an interview that his procedures require the UHP to contact the DRC whenever radioactive or presumed radioactive materials are encountered. He also stated the two agencies work closely together.

The emergency phone list is updated as necessary and provided to the State Duty Officer, UHP, the NRC and other appropriate parties. The plan has been exercised during drills and real response activities. During a table-top drill by the NRC review team, the State performed well.

6. 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.

Assessment

Funding is sufficient to support the radioactive materials program. The budget for DRC for the current fiscal year is \$1,158,400, of which \$270,000 is allocated for the radioactive materials program. The latter figure does not include the management and administration of the program. Approximately 25% of the DRC budget comes from license fees. The program charges licensees an annual fee as well as fees for new licenses and renewals. License amendments and inspections are not charged fees. License fees are collected by the DRC, forwarded to the State Treasurer and placed into the General Fund, from which the program receives its overall allocation.

Funding for the low-level waste program is based on fees from the low-level waste licensee calculated on tonnage of waste received. Because that tonnage declined for the current fiscal year, the DRC had a shortfall in revenue of approximately \$100,000 for the low-level waste program and had to submit a request for supplemental funding.

In DRC's response to the questionnaire, the review team noted that there was no specific budgeted amount for emergency planning. In previous years, the DRC had specific amounts budgeted for emergency planning which were used for capital equipment purchases. With those purchases having been made, this is no longer a separate budget item; the cost of routine drills and emergency response are a part of the overall operating budget for the Division. Special emergency planning drills outside the materials area (i.e., those for transportation accidents involving transuranic waste) are funded by a grant from the U.S. Department of Energy (Waste Isolation Pilot Project).

7. 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.

Assessment

Laboratory support is provided to DRC by the State Health Laboratory in the Department of Health, for environmental samples and bioassays. Inspectors' wipe samples are evaluated in-house by DRC staff. In response to the questionnaire, DRC indicated that the State Health Laboratory also provides non-radiological analyses on samples concerning disposal of low-level radioactive waste. In interviews with inspectors, the reviewer determined that the services of the State Health Laboratory are not used frequently (inspectors could recall incidents within the last year or two where the laboratory was used). However, when samples are analyzed by the State Health Laboratory, the inspectors were satisfied with the short turn-around time in which the laboratory provided results.

The State indicated in responding to the questionnaire that there have not been any problems in obtaining timely and accurate results from the laboratory. The reviewer used information from the State and information from the interviews of inspectors to determine that laboratory support is adequate.

8. 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). Supervisory review of inspections, reports and enforcement actions should also be performed.

Assessment

The DRC Director reviews and signs out all licensing, inspection and enforcement cases in his capacity as Executive Secretary to the RCB. The Director also receives and provides to the RCB routine reports on the status of licensing, inspection and enforcement actions by the Division.

9. Office Equipment and Support Services (Category II)

NRC Guidelines

The RCP should have adequate secretarial and clerical support. 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.

Assessment

Based upon review of licensing and inspection files and discussions with technical staff the DRC has an adequate administrative support capacity. All staff have personal computers on a local area network with electronic mail capability throughout State government. In addition, the office has recently installed Word Perfect 6.0 which is used by reviewers to generate licensing documents. The Support Services Coordinator maintains a license data base which includes not only licensing information, but also maintains a complete inspection history on each license. The Support Services Coordinator generates routine reports to assist in inspection planning and scheduling and has the capability to generate custom reports by querying the system.

10. 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.

Assessment

DRC records are available for review by the public in accordance with State law. Members of the public may come to DRC's offices and review inspection and licensing files. Copies of documents are made upon written request and payment of copying fees. In addition, the State has administrative procedures for handling and protecting proprietary information and for the storage of proprietary information.

11. 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.

Assessment

The qualifications of the technical staff were reviewed and all of the technical staff have degrees in the sciences. The training and experience of the technical staff is commensurate with the licenses issued and inspected by the State.

12. 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

The manager for the material licensing and X-ray section has been with the Utah program for approximately 10 years and signs off on all licensing,

inspection and enforcement actions before they are forwarded to the Director. Licensing and inspection staff coordinate with each other and make routine use of peer reviews as part of licensing and inspection actions. At the present time there are no junior personnel in the DRC.

13. 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 an appropriate level of staff technical competence in areas of changing technology. The RCP staff should be afforded opportunities for training that is consistent with the needs of the program.

Assessment

All of the personnel who are assigned full time to the radioactive materials program have completed the NRC core courses, as well as the Oak Ridge National Laboratories (ORNL) 5-Week Health Physics courses. In addition, the one individual who is assigned part-time to the radioactive materials program has completed most of the core courses, except nuclear medicine, as well as the ORNL 5-week course. DRC personnel have also participated in a number of other courses, such as Radiation Protection Engineering, Transportation and Well-Logging, as well as NRC-sponsored workshops.

14. Staff Continuity (Category II)

NRC Guidelines

The RCP organization structure should be such that staff turnover is minimized and program continuity maintained through opportunities for training, promotions, and competitive salaries. Salary levels should be adequate to recruit and retain persons of appropriate professional qualifications and should be comparable to similar employment in the geographical area.

Assessment

The DRC had no personnel losses during the review period. The materials program remained static in size with no staff additions to the program. The environmental monitoring and radiological waste program, however, has added two new staff since the last review. Although salary growth has been essentially flat (1-2% year) over the review period, DRC staff indicated salary levels are comparable with similar employment in the State. In addition, some DRC employees have received additional merit step increases (up to 4.75%) for successful and exceptional work performance.

15. Adequacy of Product Evaluations (Category I)NRC Guidelines

The 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. 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.

Assessment

DRC did not receive any applications for sealed source or devices evaluations during this review period and had no pending applications for review. DRC did not receive any applications or requests for approval for radioactive waste packages, solidification and stabilization media, or other vendor products used to treat radioactive waste.

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

Assessment

The review team compared the inspection frequencies utilized by the State and those utilized by NRC. The State utilizes inspection frequencies the same as or more frequent than NRC's. In many cases, the State inspects categories of licensees more frequently than NRC. For instance, the State's inspection frequency for portable gauges is 2 years, compared to NRC's four-year frequency; and DRC inspects well loggers at a two-year frequency, compared to NRC's three-year frequency.

In addition to the DRC's inspections conducted by individual inspectors of ongoing activities at the Envirocare site as discussed in Enclosure 2, the DRC multi-discipline team inspection frequency for low-level waste is annual. This year, DRC is considering breaking the week long review into several smaller reviews. The reviewers discussed with the State weighing whatever administrative and other benefits may result from this new approach against the benefits of a team approach, where discussions among the team can help to focus the inspection, reveal trends and common problems in the licensee's program, and improve the defensibility of any findings. Inspections of the ongoing activities at the site by DRC personnel achieve approximately 60% coverage of the days that the disposal site is operating.

17. Inspectors' 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.

Assessment

The two materials inspectors were accompanied by their supervisor on inspections during October 1993, so the supervisor is accompanying inspectors at least once during the State's fiscal year (July 1993 - June 1994). The supervisor's goal is to accompany inspectors once during each year.

On June 15, 1994, Scott Moore, Office of Nuclear Material Safety and Safeguards, accompanied a DRC inspector during an inspection of Associated Regional and University Pathologists (UT 800227), an in-vitro laboratory. The inspector was prepared for the inspection and conducted the inspection in a thorough manner. The inspector demonstrated competence with the regulations, inspection guides, and policies during the accompaniment. During the accompaniment and in interviews with Utah's radioactive material inspectors, the inspectors demonstrated that they are well qualified and technically competent to evaluate health and safety problems and to determine compliance with State regulations and requirements.