



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

May 21, 1993

Patricia A. Nolan, M.D.
Executive Director of Health
Colorado Department of Health
4300 Cherry Creek Dr., South
Denver, CO 80220-1530

Dear Dr. Nolan:

This confirms the exit briefing Mr. Robert Doda held with you and Mr. Robert M. Quillin, Director, Radiation Control Division, on April 9, 1993, following our review of the Colorado radiation control program. Mr. Dennis Sollenberger, Senior Project Manager, Office of State Programs, was also present at this meeting.

As a result of our review of the State's program and the routine exchange of information between the Nuclear Regulatory Commission (NRC) and the State of Colorado, the staff determined that the Colorado program for the regulation of agreement materials is adequate to protect public health and safety and is compatible with NRC's program for regulation of similar materials.

Overall, there has been significant improvement in the Colorado radiation control program. In particular, the Radiation Control Division is at full staff in the agreement materials program and occupies new office space, which lends efficiency to office operations and to the accessibility of licensee files. The Division has availed itself of many training courses for its staff and is well trained in the general requirements of an agreement materials program at the present time.

However, we did find a need to offer repeat comments on groundwater issues for the Uravan uranium mill tailings regulatory program. The NRC recognizes that Colorado brought suits against both Cotter and Uravan in 1983 under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA). As a result of these suits, Consent Decrees were issued that put in place remedial action plans for corrective actions at the two mill sites. These court-mandated actions are currently in progress at each facility and are being monitored by the Division's staff. Our past recommendations concerning groundwater issues encompassed areas where the Consent Decrees were not entirely consistent with the current requirements of the Colorado and NRC regulations. We recommended that the remedial action plans for Cotter and Uravan be modified, where possible, to bring them in better alignment with the requirements in the current regulations. The preliminary licensing statement for Cotter has achieved this objective for groundwater requirements at the uranium mill site.

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However, the preliminary licensing statement for the Uravan uranium mill is still being developed and needs to include a similar methodology to address the groundwater issues at that site. Also, a number of other technical matters were discussed with the radiation control staff and resolved during the course of the review.

This year's review involved five NRC staff members at various times during the review meeting. This allowed time for individual discussions with members of the Division's staff, in depth examinations of the various program areas, and NRC assistance for a recent amendment request to an irradiator license.

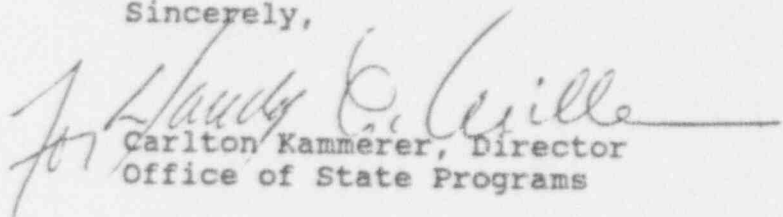
Enclosure 1 contains an explanation of our policies and practices for reviewing Agreement State programs.

Enclosure 2 is a summary of the review findings which were discussed with Mr. Quillin and his staff. We request specific responses from the State on the comments in Enclosure 2.

In accordance with NRC practice, I am also enclosing a copy of this letter for placement in the State's Public Document Room or otherwise to be made available for public review.

I appreciate the courtesy and cooperation you and your staff extended to Mr. Doda and the other NRC reviewers during the review. I am looking forward to your comments regarding groundwater issues for the Uravan uranium mill tailings program and your staff responses to the Enclosure 2 recommendations.

Sincerely,


Carlton Kammerer, Director
Office of State Programs

Enclosures:
As stated

cc w/encls:
J. M. Taylor, Executive Director for Operations, NRC
J. L. Milhoan, Regional Administrator, NRC Region IV
R. M. Quillin, Director, Colorado Radiation Control Division
NRC Public Document Room
State Public Document Room

bcc w/enclosures:
 The Chairman
 Commissioner Rogers
 Commissioner Curtiss
 Commissioner Remick
 Commissioner de Planque

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OFC	RIV:SAO	RIV:RA	OSP:SA	OSP:SA/EA	
NME	RDoda	JLMilhoan	CMappin	VMiller	
DTE	4/15/93	4/15/93	05/12/93	05/18/93	

OFC	OSP:DD	NMSS:D	OSP:D	DEDS	EDO
NME	SSchwartz	RBernero	CKammerer	HLThompson	JMTaylor
DTE	5/14/93	05/17/93	05/18/93	05/19/93	05/19/93

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

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

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

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

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

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

SUMMARY OF ASSESSMENTS AND COMMENTS
FOR THE COLORADO RADIATION CONTROL PROGRAM
APRIL 7, 1991 TO APRIL 9, 1993

SCOPE OF REVIEW

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

The 21st Regulatory Program Review meeting with Colorado representatives was held during the periods of March 22-26 and April 5-9, 1993, in Denver, Colorado. The State was represented by Robert M. Quillin, Director, Radiation Control Division (Division); Warren E. Jacobi, Supervising Health Physicist; Martin Hanrahan, Principal Health Physicist; and Don Simpson, Senior Geologist.

The NRC was represented by Robert J. Doda, Regional State Agreements Officer, Region IV; and Vandy L. Miller, Assistant Director for State Agreements Program, Office of State Programs (OSP) and Dennis M. Sollenberger, Senior Project Manager, OSP. Assistance during the review was also provided by the NRC's Uranium Recovery Field Office; groundwater issues were evaluated by Gary R. Konwinski, Project Manager, and surety requirements were evaluated by Paul W. Michaud, Project Manager.

Messrs Sollenberger, Konwinski, and Doda held meetings with management and staff on April 6, 1993, to discuss findings related to the administrative and technical aspects of the uranium mill portion of the Colorado review. The specific results and conclusions of the materials program review were discussed at a meeting on March 25, 1993. Reviews of selected materials license and incident files were conducted during March 23-24, 1993. A review of the administrative and management portions of the materials and mill program was conducted by Messrs Sollenberger and Doda. A review of selected technical aspects of the uranium mill program was conducted by Messrs Konwinski and Sollenberger during April 6-7, 1993. Mr. Michaud reviewed surety arrangements on April 6, 1993. An accompaniment of a materials inspector was conducted by Mr. Miller on March 25, 1993. Accompaniments of uranium mill inspectors were not necessary for this review period. Visits to the Cotter uranium mill facility and the Uravan uranium mill facility were made by Mr. Konwinski and State uranium mill inspectors, after the 1991 routine program review.

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 Colorado, the staff determined that the Colorado program for the regulation of agreement materials is adequate to protect public health and safety and is compatible with the NRC's program for the regulation of similar materials.

As a result of the review meeting, comments and recommendations were developed, which included two comments concerning Category I Indicators: Technical Quality of Licensing Actions, and Status and Compatibility of Regulations. In addition to the two Category I comments, two Category II comments and several general observations regarding the program were made to the State. All of the comments concerning these indicators were discussed in detail with the staff, and the reviewers offered several alternate methods regarding the steps the State can utilize to improve these program areas.

This year's review involved five NRC staff members at various times during the review meeting. This allowed time for individual discussions with members of the Division's staff.

We included a review of actions concerning the Consent Decrees for both the Cotter and the Uravan uranium mills. We commended the State for the extensive follow-up efforts in monitoring these agreements and, in particular, for the assignment of a senior geologist to monitor the progress at each site with respect to the requirements of each separate agreement.

STATUS OF PROGRAM RELATED TO PREVIOUS NRC FINDINGS

The previous NRC program review was concluded on April 7, 1991, and comments and recommendations were sent to the State in letter dated July 19, 1991. At that time, the program was found to be adequate to protect the public health and safety and compatible with the NRC's program for similar materials.

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, except for those concerning the groundwater requirements for the Uravan uranium mill. Surety matters were examined by an NRC expert participating in this year's review.

CURRENT REVIEW COMMENTS AND RECOMMENDATIONS

The Colorado radiation control program (RCP) satisfies the Guidelines in 26 of the 30 indicators. The State did not meet the Guidelines in two Category I indicators and two Category II indicators. Our comments and recommendations concerning groundwater requirements at the Uravan uranium mill require continuing actions by the Colorado program. The State has already taken actions on the other recommendations concerning the one regulation that is overdue for compatibility purposes, and the subjects relating to the Category II indicators.

A. Radiation Control Program Other Than Uranium Mills

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

Comment

The review of the State's radiation control regulations disclosed that one regulatory amendment, which is a matter of compatibility, has not been adopted by the State within a three-year period after adoption by the NRC. This amendment deals with a requirement for an emergency plan for certain significant licensees. It just became due for Agreement States during this review meeting on April 7, 1993.

We noted that this rule was being drafted and will be included in a current revision of the State's radiation control regulations. The Division believes that this revision will be adopted within the next eight months. At present, Colorado is implementing this requirement by license condition. There is only one licensee needing an emergency plan in the State of Colorado according to the criteria in NRC's regulation. The use of a license condition during the interim is acceptable to the NRC.

In addition, Colorado is one State that nearly always must adopt a version of the regulation that appears in the Suggested State Regulations (SSR). The emergency plan rule has not appeared in the SSR as yet. Given that the Radiation Control Division is already including this regulation by license condition and will adopt the regulation during the next revision of the State's regulations, this comment and recommendation is only meant to be a reminder to the State.

Recommendation

We recommend the above amendment, and any others approaching the three-year period allowed after NRC adoption, be promulgated as effective State radiation control regulations. Other compatibility regulations coming due in the near future include:

- "Standards for Protection Against Radiation," 10 CFR Part 20 amendment (56 FR 23360, dated 5/21/91 and 56 FR 61352, dated 12/3/91) that was adopted on June 20, 1991, and will be implemented on January 1, 1994.
- "Safety Requirements for Radiographic Equipment," 10 CFR Part 34 amendment (55 FR 843, dated 1/10/90) that became effective on January 10, 1991 and the effective date for the States is January 10, 1994.

B. Radiation Control Program for Uranium Mills

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

The recommendations below are made in light of NRC's retained authority in Section 274c(4) of the Atomic Energy Act of 1954, as amended, wherein NRC must make a determination that all applicable standards and requirements have been met prior to termination of a license for uranium recovery. If necessary, we could meet with Colorado staff on the implications of regulatory changes on the remedial action plans at the Cotter and Uravan sites under the Consent Decrees for these sites.

As was noted in previous reviews, the Consent Decrees that are in effect at the Cotter and Uravan facilities do not fully meet the requirements of NRC corrective action programs. Both of these sites have documented groundwater contamination that require the implementation of corrective action programs.

Our current review disclosed that, for the Cotter uranium mill facility, the combination of the preliminary licensing statement and the Stephen's report indicated that the groundwater conditions at the site are fully understood. Previously identified groundwater issues that are not resolved at this time are noted as license conditions and are attached to the licensing statement. This is an excellent approach in that it requires Cotter to respond to these issues. Based upon the Cotter response, there should be no outstanding issues at this site. This would mean that the Division has implemented a renewal with license conditions that puts the site in full compliance with Part 18 regulations. Thus, the groundwater requirements at Cotter appear to be fully addressed, unless the licensee gives a less than adequate response to the license conditions specified in the groundwater portion of the license.

While we have no further recommendations for the Cotter facility at this time, we do have recommendations for Umetco's Uravan facility, as below.

Comment

A preliminary licensing statement for a license amendment at the Uravan site indicates that the disposal cell has had sufficient evaluation of the groundwater issues. Based upon the design of the cells, as well as the Division review of the disposal cells, there is little and probably no chance that the groundwater will receive any impact from the proposed activities.

Other groundwater issues related to the Umetco site such as background and point-of-compliance (POC) wells at the Burbank Pit remain unresolved.

An April 1, 1993 letter from Umetco partially addressed this issue. The Division staff was reviewing the Umetco response at the time of the review. Similarly, the timing of remedial action, based upon a predetermined number of years or meeting agricultural standards, remains an outstanding issue. Also the Ra-226 soil concentrations in the area of some of the ponds is still an issue.

Recommendation

The above issues should be addressed in license conditions as they have been done at the Cotter site. The Division should inform Umetco that byproduct material areas must be cleaned up to the Part 18 radium standard if they are to be released for unrestricted use. The Cotter documentation should be used as an example for the preliminary licensing statement for the Uravan site.

2. Licensing Procedures (Category II Indicator)

Comment

From the review of the Uravan preliminary licensing statement for the amendment authorizing two disposal cells and the Cotter preliminary licensing statement for the license renewal, it was not clear how the State is documenting the analysis of the licensee's environmental report as required in Section 18.4.

Recommendation

The State should include as part of its preliminary licensing statement documentation a statement or section that specifically addresses the requirements in Section 18.4, for an environmental assessment.

3. Administrative Procedures (Category II Indicator)

The following comments with our recommendations are made.

A. Comment

Significant improvements were noted in the status of financial assurance arrangements since the previous NRC review of this area in 1991. Surety amounts have been increased for the Cotter-Whitewater, Umetco-Maybell and MolyCorp-Louviers facilities. Increases in surety amounts have been requested from Cotter-Schwartzwalder and Hecla-Durita.

Two surety situations continue to exist which have not been fully resolved:

The Long-Term Care amount for Hecla-Durita is currently inadequate (\$330,728) and includes a \$50,000 bond from a bankrupt utility.

Recommendation

The Long-Term Care fund should be increased to the required amount of \$529,000 (i.e. \$250,000 in 1978 dollars) prior to license renewal, which is scheduled to occur by September 1993.

B. Comment

Sweeney Mining and Milling Company is a licensee with essentially no assets to either perform reclamation nor provide a surety. The 1988 agreement between the licensee and the State to set up a surety account funded by a fee from any continued ore processing was an appropriate attempt to remedy the situation. However, it appears unlikely at this time that any appreciable amounts will be collected in this manner.

Sweeney Mining remains essentially without a surety arrangement. The ore processing surcharge has generated only \$75.00 over the past two years, for a total surety amount of \$150.00. This method of accruing funds will clearly never produce any significant amounts which can be regarded as financial assurance. The license for this facility is currently under timely renewal.

Since the licensee has not demonstrated the financial solvency to address the existing wastes on site, any continued operations could perpetuate the problem rather than mitigate it.

Recommendation

Before authorizing a license renewal for continued operation of this facility, the State should:

- (1) Determine whether any potential future operations will add to the quantities of licensed material (waste) existing at this facility.
- (2) Establish how the licensee will dispose of or reclaim any waste generated from future operations as well as from the eventual dismantlement of the processing facility.
- (3) Ensure that the licensee has established an acceptable financial assurance arrangement to cover the costs from any future operations.

C. General Observations - Colorado Program Review of April 9, 1993

The following list includes general observations made by NRC staff during the Colorado Program Review. These observations may be considered by the State for areas where improvements in the program can be made; however, no formal response to NRC regarding these observations is expected.

1. We believe it is appropriate to mention a significant improvement in the Radiation Control Division's assigned office space. The Division has, in the past, had only marginal room for files and licensing documents. Adequate working file space is necessary for complex uranium mill licensing cases and for a wide variety of radioactive material licensing files. The Division now has excellent file room space and a well organized file room system, both of which are conducive to overall staff efficiency.
2. We noted that one State licensee, Ramp Industries, Inc., was presenting some special problems for the Division at the time of our review. Ramp Industries, Inc., a radioactive waste processor/broker, was the subject of recent escalated enforcement actions for exceeding the number of barrels of waste authorized on its license and for missing required additions to its surety fund. We concur with the Division's issuance of several recent orders to this licensee and with the Division's close surveillance of activities by this licensee that relate to radiological health and safety.
3. The NRC's groundwater specialist from the Uranium Recovery Field Office, Denver, Colorado, would assist the State in the area of groundwater compliance, if requested, within the limits of current priorities.

SUMMARY DISCUSSIONS WITH STATE REPRESENTATIVES

A summary meeting to present the results of the regulatory program review was held with Dr. Patricia A. Nolan, Executive Director, Colorado Department of Health, on April 9, 1993. The scope and findings of the review were discussed. She was informed of the significant Category I findings regarding the uranium mill groundwater requirements at Uravan. Dr. Nolan stated that the State would probably proceed directly with plans for addressing these recommendations. Mr. Quillin stated that these comments would be addressed in the Preliminary Licensing Statement for Uravan, which is currently being processed. Dr. Nolan stated the Department was aware of the effort that is necessary to address these questions and she will give it a high priority within the Department. She also expressed the State's appreciation for past NRC assistance and training for the Division staff. She also stated that the Department will continue to support the radiation control program, any NRC-sponsored training courses, and cooperative efforts with the NRC and other Agreement State Programs.

Dr. Nolan believes the groundwater issues can present problems because of the Consent Decrees, which are in place and are being implemented. She was informed that the State may request technical assistance from the NRC and that this assistance could include legal input regarding the effect of the Consent Decrees.

Closeout discussions with the RCP technical staff were conducted on March 25, and on April 8, 1993. The State was represented by Mr. Quillin and his radiation control staff. Several general and specific questions were raised by the State representatives. The review guideline questions and the State's responses were discussed in detail. In addition, the results of the license and compliance casework reviews were provided to the staff for discussion. An instructional phase was included to reinforce the proper methods to be used by State personnel when notifying NRC of incidents, when submitting annual statistical data to NRC, when using the Sealed Source and Device Registry, and when sending medical misadministration data to NRC. Significant incidents include such events as abnormal occurrences, transportation accidents, or events having media interest.