

Kerr

MAR 30 1979

Ref: SA/JMcG

Dr. T. A. Wolff, Chief
Radiation Protection Section
Environmental Improvement Division
P.O. Box 968
Crown Building
Santa Fe, New Mexico 87503

Dear Ted:

We have reviewed the draft regulations enclosed with your letter of February 7, 1979 and are enclosing comments for your consideration. Those comments designated with an asterisk (*) are those which have a direct bearing on maintaining compatibility. Additional editorial comments were provided to Al Topp in a telephone conversation on March 23, 1979.

It is my understanding that you would like an NRC representative to address three areas at your April 18-20 hearing: 1) the Uranium Mill Tailings Radiation Control Act of 1978, 2) your proposed bonding requirements and 3) your proposed performance criteria on uranium mill tailings piles. We feel that the last two are adequately addressed in the enclosed comments. See comments 22-27 and 47-49. I plan to attend the hearing and will discuss the Mill Tailings Act at that time. Since no final decisions have yet been made on regulations, procedures, amended agreements, etc. for implementing the Act, I may be unable at that time to provide specifics as to how your regulations stand in relation to the Act and its implementation.

Sincerely,

Original Signed By
G. Wayne Kerr

G. Wayne Kerr, Assistant Director
for State Agreements Program
Office of State Programs

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COMMENTS ON NEW MEXICO DRAFT REGULATIONS

- *1. Section 1-101 - The word "exclusive" in the next to last line should be eliminated. It does not add to the intent of the section and raises a number of questions concerning its meaning and applicability. OK
2. Section 1-102 - We suggest that a definition of "dose commitment" be added to this list of definitions. The term is used in Part 3. NO
- *3. Section 1-102 - The term "U.S. Department of Energy" as used in Section 1-110 and other parts of the regulations should be defined. Our legal staff has developed an appropriate definition and we are enclosing a copy for your use. NO
- *4. Section 1-102 G. - In conformance with the Uranium Mill Tailings Radiation Control Act, the definition of byproduct material should be expanded to read as follows:

G. "Byproduct material" means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.
- *5. Section 1-102 RR, Footnote 2 - The second item under "Neutron Energy" should read "0.0001" and the fourth item should read "0.02". NO
- *6. Section 1-110 B - The second line should read in part "...rules and regulations of the U.S. Department of Transportation or the U.S. Postal Service" OK
- *7. Section 3-110 C. 6. - The reference to DOT regulations at the end of this section should read as follows: "Section 173.394 or 173.395 of 49 CFR Part 173 of U.S. Department of Transportation regulations". OK
8. Section 3-120 B. 1. - The word "owns" is used in some licensing sections and not in others. This should be checked for consistency. NO
9. Section 3-120 C. 1. (g) (6) - In the third line, the word "radioactive" should be changed to "byproduct". NO
10. Section 3-120 C. 2. - The inclusion of Ra-226 in this section implies that the NRC licenses the distribution of radium. We suggest radium be included in a separate section. NO
11. Section 3-120 C. 3. - We suggest that the word "receives" be taken out of line 2 since the section address radium previously acquired. OK
- *12. Section 3-210 A - We request that the phrase "15 pounds" not be deleted since it is the commonly used unit for source material used in NRC's safeguards accounting system. NO

13. Section 3-210 A. 4. - The NRC has recently amended this general license to allow for use of 15 lbs. of source material by governmental agencies for operational purposes. This section should read as follows:
"commercial and industrial firms and research, educational, and medical institutions and State and local governmental agencies for research, development, educational, commercial or operational purposes".
- IL* *14. Section 3-210 E. 4. (e) - The reference to NRC regulations should be: "pursuant to 10 CFR Part 110". ?
- *15. Section 3-220 D. 1. (a) - The words "or an Agreement State" should be deleted since you would be authorizing possession of these sources only by New Mexico licensees. NO
16. Section 3-220 D. 3. - The words "or an Agreement State" should be deleted for the reason given in comment 10. NO
17. Section 3-220 E. 1. - It is not clear why Co-60 was deleted from the list in this section. NO
- *18. Section 3-220 F. 3. - In conformance with the addition of Mock-Iodine to this general license, a new paragraph (e) should be added to this section to read as follows:

"(e) The general licensee shall dispose of Mock-Iodine reference or calibration sources described in 3-220 F. 1. (h) as required by section 4-300 of these regulations".
19. Section 3-220 F. 4. (a) - The crossed-out phrase in this section should remain and the reference changed to 3-340 H. This section should also include Mock-Iodine-125 in the list of isotopes. NO
- *20. Section 3-220 F. 6. - The following should be added on to the sentence in this section: "except that such persons using the Mock-Iodine-125 described in 3-220 F. 1. (h) shall comply with the provisions of sections 4-300, 4-410, and 4-420 of these regulations." O/S
21. Section 3-230 - Paragraph B of this section is missing. It should be placed at the top of page 3-4F and read as follows:

"(b) A general license is hereby issued to any private carrier to transport radioactive material, provided the transportation is in accordance with the applicable requirements of the regulations, appropriate to the mode of transport, of the U.S. Department of Transportation insofar as such regulations relate to the loading and storage of packages, placarding of the transporting vehicle, and incident reporting." O/S

mills

22. Section 3-300 F. - This section should provide the applicant with an opportunity to appeal the Director's decision when he disagrees with the applicant's claim that certain information in the application is proprietary. NO
23. Section 3-300 G. - The intent of this section is unclear. It does not specifically define the types of construction activities which may be undertaken prior to issuance of the license and completion of the environmental review. You may want to use NRC's preacceptance review concept with respect to completeness of the application and to specifically define the types of activities intended in the use of the word "construction". Section 50.10 of 10 CFR Part 50 may be of some help here. NO
24. Section 3-300 H. 2. - We suggest deletion of the word "first". NO
25. Section 3-315 B. - We recommend that more specific provisions be added here. Chapter 14 of the draft GEIS on uranium milling outlines the approach to bonding and financial surety that NRC is considering. We have attached a copy of Chapter 14 for your convenience. NO
26. Section 3-315 D. - The bond value in this section should indicate how the amount of bonds will be determined, e.g. cost estimates of tailings area reclamation and mill site decommissioning. You may also wish to indicate that other factors such as inflation will be used in making periodic adjustments to these figures. NO
27. Section 3-315 E. - It may also be appropriate that the director have authority to lower as well as raise the bond amount depending on the scope of a licensed program. NO
28. Section 3-320 B. - The NRC has recently amended its regulations regarding the licensing of individual physicians. We are enclosing a copy of the corresponding change to the Suggested State Regulations (SSR) for your consideration. The amendment will eliminate private practice licenses in those cases where an institutional license should be issued. NO
29. Section 3-320 C. - We recommend the adoption of the amendments which extend the medical group licensing concept. Appropriate wording can be found in the latest edition of the SSR (1978). NO
30. Section 3-340 D. 4. (f) - The word "Division" in the third line should be changed to "agency" since this refers to agencies other than the New Mexico Environment Improvement Division. OK
31. Section 3-340 D. 4. (h) - The word "Division" in the fourth line should be changed to "agency" for the reason given in comment 24. NO

32. Section 3-340 F. - This section appears twice. The second has the correct 10 CFR references.
 - *33. Section 3-340 H. 3. (a) - The list of isotopes in this section should include "Mock Iodine-125 in units not exceeding 0.05 microcurie of iodine-129 and 0.005 microcurie of americium-241 each.
 - *34. Section 3-340 H. 5. - A sentence should be added to this section to read: "In the case of Mock Iodine-125 reference or calibration sources, the information accompanying the source must also contain directions to the licensee regarding the waste disposal requirements set out in Section 4-300 of these regulations.
 35. Section 3-340 J. 4. (g) - The word "Division" in the first line should be changed to "agency" for the reason given in comment 24.
 36. Section 3-340 J. 4. (h) - The word "Division" in the third line should be changed to "agency" for the reason given in comment 24.
 37. Section 3-460 - Since New Mexico has now been an Agreement State for almost five years, there is really no further need for this section and it may be eliminated.
 38. Section 4-100 B. - In the next to last line in this section, the words "and other societal and socio-economic considerations" should be inserted immediately following the words "public health and safety".
 39. Section 4-140 B. - In the fourth line, the reference to Part 4 should be more specific. It should reference Appendix A, Table II.
 40. Section 4-170 - In the second line of the text, the word "dose" should be changed to "exposure" since the intent is to use the term in its broadest meaning.
 41. Section 4-230 A. - In the third line, we believe the English unit should be left in, at least parenthetically. In the fourth line, the "4 mrem" should be "5 mrem".
 42. Section 4-260 A. - It is sufficient here to reference "Section 20.205 of 10 CFR Part 20". The reference to Part 71 is too broad and may be confusing. Likewise in Section 4-260 D. 1., 4-260 D. 4., and 4-260 E. 1. the reference should read "Section 20.205 of 10 CFR Part 20".
 43. Sections 4-420 A. 4 and B. 4. - Due to inflation, NRC has recently raised these dollar figures to \$200,000 and \$2,000 respectively.
 44. Section 4-440 A. 5. - The word "persons" in the sixth line should be changed to "individuals".
- List
no 4-440
20

45. Section 4-450 - This section is no longer needed since these requirements are addressed in Part 10.
46. Section 7-300 D. - The NRC published its final rule on teletherapy calibration on January 8, 1979. A copy is enclosed for your convenience. You will note that the final version differs substantially from the proposed rule. We recommend that the final rule be considered and that appropriate changes be incorporated into 7-300 D. *mills*
47. Section 12-300 E. - This section suggests that damage from man-made or natural occurrences are expected. This would be contradictory to objective 7 in Section 12-300 K. *yes but catch up old.*
48. Section 12-300 G. - It should be stated that the cost evaluation will be used in determining bonding requirements.
49. Section 12-300 K. - We have no specific objection to these performance objectives, however, NRC is considering more specific criteria regarding mill decommissioning and long-term tailings control. We have enclosed a copy of Chapter 12 of the draft GEIS which outlines the criteria that NRC staff is considering.
50. Part 5 - Part E of the SSR has recently been revised. (See the 1978 Edition of the SSR) The most important changes pertain to the locking of devices, E.102; the inspection and maintenance of devices, E.108; and a new section on records required at temporary job sites, E.304.
51. Section 10-160 C. - The phrase "except for good cause" appears to be out of place. We do not believe that it is the intent of the wording to imply that there may be a good cause to discriminate against a worker. We believe the meaning is clearer without the phrase.

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DEC 07 1979

Mr. Thomas E. Baca, Director
Environmental Improvement Division
P. O. Box 968, Crown Building
Santa Fe, New Mexico 87503

Dear Mr. Baca:

Enclosed is a summary report of the Church Rock environmental impact assessment efforts of the various federal agencies which my staff has compiled.

I would like to take this opportunity to direct your attention to the following issues that need resolution immediately.

- 1) A modification of the BPNL contract has been initiated to expand their services to include statistical review of the Church Rock soil sampling data. Sample collection was essentially completed by October 12, and sample analysis of the majority of samples (about 2500 samples) was completed by November 1, 1979. To date, neither the NRC nor BPNL has been able to obtain EID's computerized tabulation of results. Because of this delay, BPNL performance has been severely restricted; therefore, if the required data are not furnished to NRC and BPNL by December 21, 1979, we shall have to terminate this phase of support of the Church Rock assessment.
- 2) In addition to the EID sample tabulation, about 1500 samples analyzed by the mobile BPNL laboratory for UNC have not been identified, organized, nor reported to NRC. Unless this information is obtained from UNC by December 21, 1979, we will not be able to include them in the data base to be used for the statistical interpretation of the dam failure's environmental impact. Therefore, EID should specifically request that UNC immediately provide the required data to NRC.

If you have any questions regarding this matter please contact me.

Sincerely,

Original Signed by

Ross A. Scarano, Chief
Uranium Recovery Licensing Branch
Division of Waste Management

Enclosure:
As stated

DUPE

8004160354

PDR

POOR ORIGINAL

DEC 07 1979

MEMORANDUM FOR: Ross A. Scarano, Chief
Uranium Recovery Licensing Branch

FROM: Gregory G. Eadie
Uranium Recovery Licensing Branch

SUBJECT: SUMMARY OF THE CHURCH ROCK ENVIRONMENTAL IMPACT
ASSESSMENT EFFORTS

Distribution:

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DCS

The following summary is intended to provide a general outline of the specific tasks and responsible agency's involvement in the assessment of the environmental impact of the UNC Church Rock uranium mill tailings dam failure. As of this date, in addition to New Mexico and Arizona's activities, at least four federal agencies are actually conducting some type of evaluation of the situation based mostly on their expertise or legislative mandate. This outline is meant to add some perspective to these separate efforts, and hopefully will aid in the ultimate coordination of all these activities to provide for the collection and adequate review of all available and necessary information in order to insure the protection of the public health and safety. These efforts will supplement the on-going activities of UNC, as described in their letter dated September 12, 1979 and per recommendations of the New Mexico Environmental Improvement Division (NMEID) (see Enclosures 1 and 2).

The general assessment work plan may be outlined as follows; with more specific descriptions of the various tasks included in the discussions:

- Task I: Establish Soil Clean-Up Criteria
- Task II: Assess Existing Contamination
- Task III: Verify Soil Clean-Up Efforts
- Task IV: Release Area for "Unrestricted Use"
- Task V: Define Continued Monitoring Programs
- Task VI: Issue Final Report

Task I: Establish Soil Clean-Up Criteria

The goal of this task was to establish acceptable soil/sediment radiological clean-up criteria which are protective of public health.

- In response to a request by the State of New Mexico, and in cooperation with the NMEID, acceptable levels of residual radioactive contamination of the soil and sediments of the affected areas of the Rio Puerco were provided in the NRC letter dated August 23, 1979 (see Enclosure 3). Based on an evaluation of the limited data available at that time, it was concluded that an effective clean-up program could be conducted by evaluating the thorium-230 and radium-226 concentrations in soils/sediments. Acceptable clean-up levels were established to be no greater than 30 pCi/g of thorium-230 and 10 pCi/g of radium-226.

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DEC 07 1979

J SEE ATTACHED ADDRESSEE LIST

Dear J:

Enclosed is a compilation I have made of documents concerning the various agencies' environmental impact assessment efforts regarding the UNC Church Rock uranium mill tailings dam failure.

I am most anxious to continue to share and review any pertinent data and hopefully, we will all be able to coordinate our individual efforts in order to insure the protection of public health and safety in the affected areas. If you have any comments or suggestions on this matter, please contact me (phone: 301-427-4103).

Sincerely,

Original Signed by

Gregory G. Eadie
 Uranium Recovery Licensing Branch
 Division of Waste Management

Enclosure:
 As stated

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Environmental Protection Council
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Window Rock, Arizona 86515jMr. Tsoj

Enclosure

FILE: UNC 2

AUG 23 1979

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Mr. Thomas Baca, Director
Environmental Improvement Division
Department of Health and Environment
P.O. Box 968, Crown Building
Santa Fe, New Mexico 87503

Dear Mr. Baca:

This letter is to advise you of the results of our review efforts to date concerning the tailings impoundment failure at the Church Rock uranium mill of United Nuclear Corporation. This letter also confirms discussions between our staffs over the past several weeks concerning radioactive contamination cleanup limits and points which should be incorporated into the operator's monitoring program. Further, we ask that you obtain from the operator certain additional information we need to complete our geotechnical evaluation of the impoundment failure.

We appreciate your assistance in this matter and are confident that continued cooperation between our staffs will promote a speedy resolution of the problem. So far, the NRC staff and our geotechnical consultants have visited the site, reviewed documents made available by the operator, and carried on continuing discussions with the State Engineer's office and your Radiation Protection Section staff concerning the results of sampling and analysis conducted to date.

CLEANUP OF CONTAMINATION

On the basis of (1) evaluation of the results of the limited sampling and analysis conducted to date, (2) evaluation of potential radiological exposure pathways, and (3) the desirability of reducing exposure to the maximum extent reasonably achievable, we consider that an acceptable cleanup would be removal of contamination to levels which are no greater than 10 pCi/gm Ra-226 and 30 pCi/gm Th-230 (both inclusive of background).

These levels are selected as one which will be protective of public health. Various potential exposure paths which affect human health were evaluated with respect to the levels of radioactive contamination in the arroyo following cleanup. Specifically, we looked at five major pathways: inhalation of radon daughters, direct gamma exposure, inhalation of contaminated windblown particulates, ingestion of beef cattle which graze near and drink from the Rio Puerco, and infrequent direct drinking from the stream by people. (A more complete explanation

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