

Statement for the public record
regarding proposed amendments to the
Radiation Protection Regulations Hearing

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at

May 16-18, 1979 Hearing
on Proposed Radiation Protection Regulations for New Mexico
of New Mexico Environmental Improvement Board
Albuquerque, New Mexico

I appreciate the opportunity to appear today to present comments on the proposed "Radiation Protection Regulations for New Mexico."

By letter dated February 7, 1979, Dr. Wolff of New Mexico Environmental Improvement Division requested our comments on a total revision of existing New Mexico regulations. I would note that New Mexico, like most Agreement States, uses the Suggested State Regulations for Control of Radiation prepared by the Conference of Radiation Control Program Directors as a model in revising its regulations. We provided comments to New Mexico on its draft regulations by letter dated March 30, 1979 addressed to Dr. Wolff. The State has incorporated certain changes in the regulations and our outstanding comments are shown in Attachment A. Those comments designated with an asterisk (*) are those which have a direct bearing on compatibility.

However, at Dr. Wolff's request and with one exception, I am focusing my statement on those parts of the regulations affecting uranium mill licensing and on the provisions of the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) which have significant implications for the Agreement States.

There is one other area I want to emphasize to the Board. Each year the NRC makes a consolidated assessment of the continuing adequacy and compatibility of Agreement State programs and certifies such findings to the U. S. Department of Labor. For calendar years 1976 and 1977 (and expected for calendar year 1978) we have been unable to certify to DOL regarding the compatibility of the New Mexico program because of its failure to adopt the equivalent of 10 CFR Part 19 of the Commission's regulations. Part 19 is concerned with Notices to Workers, Instructions and Reports to Workers, the right of worker representatives to accompany State inspectors during inspections, etc. In this regard, I am pleased to note that appropriate provisions have been incorporated in the proposed regulations.

Comments 13-18 and 36-38 of the attached comments address the bonding requirements of the proposed regulations as they affect uranium mill licensees, as well as the use of performance criteria for mill tailings. I believe the comments are self-explanatory. However, I want to bring to your attention the fact that NRC has not promulgated formal regulations regarding these matters. Proposed regulations will be published in the near future in connection with NRC's issuance on April 27, 1979 of a draft Generic Environmental Impact Statement on Uranium Milling (GEIS). Since the final form of NRC's regulations will not be established until late 1979, it may be that New Mexico will have to adopt modified regulations at a later date. This is because the Uranium Mill Tailings Radiation

Control Act of 1978, which I will address momentarily, requires the Agreement States to adopt standards in the regulation of mills and mill tailings which are equivalent, to the extent practicable, or more stringent than those adopted by NRC and the Environmental Protection Agency.

I would now like to cover in some detail the provisions of UMTRCA and its impact on the States. I feel some preliminary information would be useful to understand what gave rise to UMTRCA and how the GEIS relates to the developing program for improved regulation of mill tailings. The subject of regulation of uranium mills, including adequate disposal of mill tailings, is one which the NRC has been wrestling with for some time. I would like to focus on two aspects of the matter, namely, why it is an issue to be concerned about, and second, the key provisions of UMTRCA and its impact on the states.

The demand for uranium began to increase significantly during the 1940's when uranium was being produced for the war effort. Subsequent to that, the developing commercial nuclear industry generated additional demands. Peak production of uranium came in the early 1960's when approximately 7 million metric tons of ore were processed each year. Of course, most of the ore remains after the extraction of the uranium and ends up in what is commonly known as tailings.

The cases of the Vitro pile in Salt Lake City and widespread use of tailings in construction in Grand Junction, Colorado are well known. Until the mid-1970's the concern about tailings disposal was rather modest. Licensees attempted to keep the tailings in place, to minimize wind and water erosion, and to make some efforts at revegetation. In general, it was considered necessary to exert control of an industrial nuisance. There was no significant attempt to keep down radon levels emanating from the tailings pile or direct gamma radiation from the piles, except for some restriction of access by fencing and posting.

In order to address the Federal-State interface, it is useful to discuss two significant matters. First, is the preparation of the GEIS on uranium milling, and second, the passage of the Uranium Mill Tailings Radiation Control Act of 1978 which was signed into law on November 8, 1978.

On May 14, 1975, we published in the Federal Register a notice of petition for rule making submitted by the Natural Resources Defense Council requesting NRC to prepare a programmatic environmental impact statement on uranium milling including the Agreement States. On June 3, 1976, we published a notice stating that such a GEIS would be prepared but that licensing actions for individual mills would continue in the interim. The purpose of the GEIS was to assess environmental

impacts from uranium milling including the management of tailings. On March 14, 1977, there was published a Federal Register notice with the proposed scope and outline of the GEIS. It was to cover, among other things, the history of milling, regional environments, milling operations, environmental impacts, tailings management, regulatory programs and recommendations for regulatory action. The notice stated that the GEIS would address conventional uranium milling but there would be no significant treatment of in-situ uranium processing. The States indicated in-situ should be covered in some detail. The NRC feels the problems related to in-situ processing primarily affect ground water and are site specific.

The objectives of the GEIS are to provide a statement of environmental impacts for uranium milling, provide information on which to base regulatory requirements, and to support rule making. The major issues treated are: (a) technical feasibility of alternatives for handling of tailings; (b) environmental and economic constraints of alternatives; (c) short-term health effects during mill operations and long-term effects after decommissioning; and (d) institutional questions related to tailings disposal and long-term control such as the need for land use controls, site monitoring, financial surety for tailings disposal and site decommissioning, and the need for long-term funding for surveillance purposes.

A notice of the availability of the draft GEIS appeared in the Federal Register on April 27, 1979. Regulations incorporating specific conclusions of the GEIS will also be promulgated for comment in the near future.

Our tentative conclusions are that there would be increased environmental impacts from the uranium milling industry if the method of regulation practiced in the 1960's and early 1970's was allowed to continue. The resulting effects on humans would be an increase in premature deaths and life shortening. Therefore, the GEIS recommends the following:

1. Improved emission control during milling operations to meet EPA standards in 40 CFR 190.
2. Isolation of tailings from the environment to the maximum extent practicable. The "prime option" for disposal of tailings is placement below grade, either in mines or specially excavated pits, although other proposals will be considered on a case-by-case basis.
3. Placement of sufficient cover over tailings disposal areas to reduce the direct gamma levels to background and radon releases to about twice background with a minimum of three meters of cover.
4. Minimize seepage into ground water.
5. Financial surety arrangements to be established to assure adequate decommissioning and reclamation.

6. Long-term control of disposal sites including control of land use and periodic inspection. Such control should be provided through ownership and custody of disposal sites by a Government agency. There will be a requirement that operators contribute funds before termination of a license for long-term surveillance of sites.

I would note that the latter two, financial sureties and ownership by a government agency, are required in most cases by UMTRCA. I would also note that in the meantime, the NRC is addressing these issues through the licensing process and utilization of the NEPA process.

We expect to hold a series of public meetings on the GEIS and associated proposed rules during the comment period. They will be held at various locations, primarily in the Western milling regions.

I would now like to discuss the Uranium Mill Tailings Radiation Control Act of 1978. Two principal purposes of this Act were to provide remedial action for 22 inactive sites resulting from earlier milling operations which, if not corrected, would present long-term problems in terms of unnecessary exposure to the public. Two of those sites are located at Shiprock and Ambrosia Lake, the former being on Navajo Indian land. The second purpose of the Act was simply to prevent any future Salt Lake City or Grand Junction type of problem. It should be noted that the principal driving force for the Act was adequate control of mill tailings and not mill operations.

Title I of the Act describes a remedial action program for the 22 designated sites. The principal responsibility for carrying out the provision of Title I rests with the U. S. Department of Energy. Section 103 of the Act provides for State cooperative agreements with the Department of Energy to perform remedial actions at the sites. These arrangements must be concurred in by the NRC. Section 104 provides that the States or the Federal Government may be required to acquire the designated processing sites. Section 105 covers cooperative agreements with Indian tribes. Section 107 of the Act provides for 90% Federal funds, and 10% State funds for the remedial action program. For those sites located on Indian lands, the Federal Government will pay the entire cost of the remedial action.

Except for the Canonsburg, Pennsylvania case listed in Title I, DOE is not starting any remedial action at this time and will only work under a cooperative agreement with the States. In fact, DOE is precluded from undertaking remedial action until EPA has promulgated appropriate standards. Those standards are to be promulgated by November 8, 1979, for remedial action sites. DOE is reviewing environmental assessments on each of these sites to determine whether environmental impact statements will be necessary. They have decided to do a full EIS on the Vitro site in Salt Lake City. DOE will be working with the States in the next several months and has included 11.5 million dollars in the FY-1980 budget request for remedial action. The authority of the DOE to perform the remedial action will terminate on November 8, 1986, unless extended by the Congress.

Title II of the Mill Tailings Act establishes the program for NRC and the Agreement States for the regulation of tailings at active processing sites. Section 201 of the Act expands the definition of "byproduct material" in the Atomic Energy Act to include "the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content." Prior to enactment of this Act, the NRC did not have explicit authority to regulate tailings after a license for a uranium mill processing operation was terminated. We did exert some authority over tailings disposal through the NEPA process. I would note, however, that since Agreement States regulate all radioactive materials, they did have their own explicit authority over tailings and, in fact, some States had issued specific regulations on control of tailings.

Section 202 of the Act provides that after November 8, 1981, the ownership of tailings and land must be transferred to the State or the Federal Government prior to termination of the license unless a determination is made that transfer of title is not necessary or desirable to protect the public health, safety or welfare, or to minimize or to eliminate danger to life or property.

Section 203 of the Act provides explicit authority to require financial arrangements for decontamination, decommissioning and reclamation of sites. Some contemplated methods of financial arrangements which the Commission would deem acceptable are discussed in

the GEIS. These may include cash deposits, surety bonds, certificates of deposit, deposits of government securities, and letters of credit. Others would be evaluated on a case-by-case basis. Long-term funding for monitoring of disposal sites is expected to be in the form of a one-time charge of a minimum of \$250,000 dollars (1978 dollars) although site specific situations might require more. The purpose of carrying out some kind of surveillance is to confirm that there is no unexpected erosion occurring and there is no unexpected human activity at the site. I would like to skip for a moment Section 204 which deals directly with the Agreement States, since I will address it in some detail. Section 205 of the Act gives NRC additional authority to require exempt persons to conduct monitoring, perform remedial work, and take other measures to protect health and safety. This may apply to certain DOE Title I remedial sites. Section 206 of the Act requires EPA to promulgate standards for the remedial sites by November 8, 1979, and standards for new sites by May 8, 1980. EPA must coordinate the promulgation of these standards with DOE and NRC. It also states that non-radiological standards promulgated under UMTRCA must be consistent with those under the Solid Waste Disposal Act, specifically the amendments contained in the Resource Conservation and Recovery Act of 1976 (RCRA). Under RCRA, EPA issues permits but they are precluded by UMTRCA from issuing permits for tailings disposal. Section 207 provides for grant money for Agreement States which I will discuss momentarily.

Title III of the Act directs NRC to make a study on two other sites in New Mexico in consultation with the State to determine the extent of existing authority regarding control of residual material at these sites. This study is currently underway in our Office of the General Counsel

I would now like to address the impact on the States of Title II of this Act. I previously mentioned that Section 204 of the Mill Tailings Act modified Section 274 of the Atomic Energy Act which is the statutory basis for the Agreement State program. It conforms the Agreement State programs to a regulatory framework similar to that required of NRC. With regard to technical requirements for licensing of mills and tailings, the Agreement States must establish ownership requirements for land and tailings in accordance with Section 202 of UMTRCA. It also requires them to adopt standards which are equivalent, to the extent practicable, or more stringent than NRC and EPA standards.

The Act also requires the Agreement States to adopt the following procedural requirements:

- a. There must be public notice and opportunity for submission of written comments and a hearing in licensing actions.
- b. There must be an opportunity for cross-examination.
- c. A written determination based upon findings and evidence presented during the public comment period must be made and be subject to judicial review.

- d. There must be an opportunity for public participation, submission of written comments or a hearing and judicial review in the case of rule making.
- e. A written analysis of the environmental impact of licensing actions concerning assessment of radiological and non-radiological impacts, impact on waterways and ground water, consideration of alternatives, and consideration of long-term impacts including decommissioning and reclamation must be prepared. This analysis must be made available prior to commencement of public proceedings.
- f. The State must prohibit major construction activities prior to making the assessment mentioned above.

This section of the Mill Tailings Act requires the State to transfer certain funds to the United States which are collected for long-term maintenance and monitoring or forfeited sureties for reclamation if transfer of tailings to the U. S. is required. The Act provides that Agreement States may continue to regulate as previously until November 8, 1981, and subsequent to that may regulate under amended Section 274 agreements. It further provides that NRC may terminate or suspend all or part of its Section 274 agreements if the State has not complied with one or more of the requirements in Section 274. Previously, the requirements for termination had to be based on a determination that such action was necessary to protect the public health and safety.

The final provision of this Act which I would like to discuss is Section 207. It authorizes to be appropriated for FY-1980 to the NRC, monies not to exceed \$500,000 to be used for making grants to Agreement States to aid in development of State regulatory programs to implement provisions of the Mill Tailings Act. This would mean the development of statutes, regulations, administrative procedures and perhaps procurement of monitoring equipment and training of State employees. Our staff is working on a plan to carry out this grant program.

Subsequent to passage of the Mill Tailings Act, certain significant issues have arisen. The first issue is related to the question of when the procedural requirements which I discussed earlier are required to be implemented by the Agreement States. The staff presented a paper to the Commission which was discussed on March 7, 1979. The staff recommended that these requirements not be made effective in the Agreement States until three years after enactment of the law, which would mean November 8, 1981. The second major issue which arose is whether the NRC has concurrent jurisdiction on tailings in Agreement States immediately. The staff position presented to the Commission was that the construction of the Act would require the NRC to exert immediate concurrent licensing of such tailings. Both of these issues have raised considerable concern amongst the States. The concern was expressed to the Commission in a letter dated January 18, 1979 by Ms. Dolezal, Chairperson of the Conference of Radiation Control

Program Directors. In addition, some of the States have furnished individual views to the Commission on these issues. New Mexico presented oral views at the Commission meeting on March 7, and Governor King furnished written comments by letter dated March 22, 1979. In general, they feel that they cannot immediately implement the procedural requirements and that the concurrent regulatory jurisdiction would be disruptive to the Agreement State program because it might render void current licensing actions taken by the States, could cause applicants to avoid working with the States, and would be unnecessary duplication of effort. No final decisions have been made by the Commission on these issues at this time.

In summary, I hope you have obtained some feel for the actions which have taken place at the Federal level to address an issue of major concern. The impact on the States is very large. Several of them will be directly involved in DOE's remedial action program. The Agreement States must adopt the new procedural requirements and utilize the technical standards which will be promulgated this year. This requires the States to develop an expanded regulatory program including new statutes, new standards and regulations, obtain increased staffing, and obtain the necessary funding.

ATTACHMENT A

COMMENTS ON NEW MEXICO DRAFT REGULATIONS

1. 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.
- *2. 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.
- *3. 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.
- *4. Section 1-102 RR, Footnote 2 - The second item under "Neutron Energy" should read "0.0001" and the fourth item should read "0.02".
5. Section 3-120 B.1. - The word "owns" is used in some licensing sections and not in others. This should be checked for consistency.
6. Section 3-120 C.1.(g)(6) - In the third line, the word "radioactive" should be changed to "byproduct".
7. 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.
- *8. 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.

- *9. 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.
10. Section 3-220 D.3. - The words "or an Agreement State" should be deleted for the reason given in comment 7.
11. Section 3-220 E.1. - It is not clear why Co-60 was deleted from the list in this section.
12. 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.
13. 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.
14. 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.
15. Section 3-300 H.2. - We suggest deletion of the word "first".
16. 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.
17. Section 3-315 D. - The bond values 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.
18. 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.

19. 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.
20. 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).
21. 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.
22. Section 3-340 D.4.(h) - The word "Division" in the fourth line should be changed to "agency" for the reason given in comment 21.
23. Section 3-340 F. - This section appears twice. The second has the correct 10 CFR references.
- *24. 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.
- *25. 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.
26. Section 3-340 J.4.(g) - The word "Division" in the first line should be changed to "agency" for the reason given in comment 21.
27. Section 3-340 J.4.(h) - The word "Division" in the third line should be changed to "agency" for the reason given in comment 21.
28. 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.

29. 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".
30. Section 4-140 B. - In the fourth line, the reference to Part 4 should be more specific. It should reference Appendix A, Table II.
31. 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.
32. 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".
33. 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".
34. Section 4-440 A.5. - The word "persons" in the sixth line should be changed to "individuals".
35. Section 4-450 - This section is no longer needed since these requirements are addressed in Part 10.
36. 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.
37. Section 12-300 G. - It should be stated that the cost evaluation will be used in determining bonding requirements.
38. 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. Chapter 12 of the draft GEIS outlines the criteria that NRC staff is considering.

39. 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.
40. 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.

SSR Revisions

Sec. A.2

"U. S. Department of Energy" means the Department of Energy established by Public Law 95-91, August 4, 1977, 91 Stat. 565, 42 U.S.C. 7101 et seq., to the extent that the Department exercises functions formerly vested in the U. S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U. S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104(b), (c) and (d) of the Energy Reorganization Act of 1974 (Public Law 93-438, October 11, 1974, 88 Stat. 1233 at 1237, effective January 19, 1975) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Public Law 95-91, August 4, 1977, 91 Stat. 565 at 577-578, 42 U.S.C. 7151, effective October 1, 1977).

SSR, p. C40, line 196 should be revised to read:

(2) To the U. S. Department of Energy.

(b) Specific Licenses to Individual Physicians for Human Use of Radioactive Material.

(1) An application by an individual physician or group of physicians for a specific license for human use of radioactive material will be approved if:

(i) the applicant satisfies the general requirements specified in C.25;

(ii) the application is for use in the applicant's practice in an office outside a medical institution;

(iii) the applicant has access to a hospital possessing adequate facilities to hospitalize and monitor the applicant's radioactive patients whenever it is advisable; and

(iv) the applicant has extensive experience in the proposed use, the handling and administration of radionuclides, and where applicable, the clinical management of radioactive patients.

(2) The Agency will not approve an application by an individual physician or group of physicians for a specific license to receive, possess, or use radioactive material on the premises of a medical institution unless:

(i) the use of radioactive material is limited to:

(a) the administration of radiopharmaceuticals for diagnostic or therapeutic purposes,

(b) the performance of diagnostic studies on patients to whom a radiopharmaceutical has been administered,

(c) the performance of in vitro diagnostic studies, or

(d) the calibration and quality control checks of radioactive assay instrumentation, radiation safety instrumentation and diagnostic instrumentation;

(ii) the physician brings the radioactive material with him and removes the radioactive material when he departs. (The institution cannot receive, possess, or store radioactive material other than the amount of material remaining in the patient); and

(iii) the medical institution does not hold a radioactive material license under C.26(a).