



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

July 29, 1999

The Honorable John D. Dingell  
United States House of Representatives  
Washington, D.C. 20515-6115

Dear Congressman Dingell:

I am responding to your letter dated July 12, 1999, in which you discussed your concern about the U.S. Nuclear Regulatory Commission's (NRC's) regulation of the disposal of 11e.(2) byproduct material located at several Formerly Utilized Sites Remedial Action Program (FUSRAP) sites. Under the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA), which added a new section 83 to the Atomic Energy Act of 1954 (AEA) as amended, the NRC does not have authority to regulate the cleanup of this material if the material was not generated by an activity licensed by the NRC on the effective date of UMTRCA (November 8, 1978), or thereafter. (Note that I am using the term "pre-1978 section 11e.(2) byproduct material" in this letter in order to follow the terminology used in your letter, and assume that the term is intended as a shorthand reference to residual radioactive material resulting from the processing of ores before the enactment of UMTRCA.)

You expressed a concern that because of its position on pre-1978 11e.(2) byproduct material, the NRC has determined that such material may be sent to sites regulated under the Resource Conservation and Recovery Act (RCRA) rather than to disposal sites regulated by the NRC. The NRC has stated only that there are no NRC rules or regulations that preclude disposal of the material at a RCRA facility, and that disposal of this material is subject to the jurisdiction of other Federal and State agencies. Additionally, there are NRC licensed facilities that have accepted pre-1978 11e.(2) byproduct material for direct disposal or processing and disposal in their mill tailings impoundments. For example, Envirocare of Utah has an NRC license that allows it to accept some forms of this material directly for disposal. Pre-1978 11e.(2) byproduct material presented to NRC or Agreement State licensed facilities for disposal or processing must comply with all requirements applicable to those facilities.

With regard to your specific questions:

1. How will this action improve protection of the public health and the environment?

Based on our knowledge of RCRA requirements, we believe that both RCRA landfills and NRC-regulated and licensed disposal facilities are protective. However, protection of the public health and environment is improved with the availability of additional waste disposal options, resulting in the cleanup and release of these sites for other uses. Also, see our response to Question 5 below.

2. Please provide copies of the studies NRC used in making its health and safety determinations.

To our knowledge, no formal NRC studies have been conducted to compare RCRA landfills and NRC licensed 11e.(2) byproduct disposal facilities. Rather, our position is based on our knowledge of RCRA and NRC requirements and experience in regulating waste disposal. In fact, NRC's groundwater protection requirements in 10 CFR Part 40, Appendix A, are based upon RCRA requirements in 40 CFR Part 264 (see, 40 CFR 192).

3. What are the qualitative differences in the radioactive constituents of pre- and post-1978 Section 11e(2) by-product material that compel NRC to require two distinct disposal standards?

The NRC does not have two distinct disposal standards in 10 CFR Part 40. It has no standard for FUSRAP material not within its legal competence. It is important to note that pre-1978 and post-1978 11e.(2) byproduct material have similar radiological characteristics, and in some cases, pose less risk than naturally-occurring radioactive material (NORM) disposed of at some RCRA facilities. It is possible that pre-1978 11e.(2) byproduct material at unlicensed sites may have been commingled with other radioactive or hazardous material that may or may not currently be under NRC's jurisdiction. For post-1978 11e.(2) byproduct material, however, commingling has generally been prevented under NRC or Agreement State regulatory programs.

4. Please detail the differences between NRC requirements in radioactive waste disposal and disposal under RCRA, specifically:

- a. What controls or protections exist at RCRA landfills that ensure the protection of public health, safety and the environment from radioactive byproduct material disposed at such facilities?

The Environmental Protection Agency (EPA) has an extensive set of regulations in 40 CFR 260 through 272 for the management of hazardous wastes. RCRA disposal facilities rely in part on a system of liners and leachate detection and collection systems to prevent releases of hazardous materials to the environment. RCRA regulations for disposal also address monitoring and inspection, site selection, and other detailed requirements. Most, if not all, of these controls would also help to protect public health, safety, and the environment from radioactive byproduct material. Indeed, some RCRA facilities are licensed to receive NORM and exempt source material, the controls for which would be similar to radioactive byproduct material.

- b. What protections are in place to ensure worker health and safety from the risks of exposure to radioactivity at RCRA landfills that have accepted Section 11e.(2) byproduct material for disposal from the Army Corps of Engineers under the FUSRAP program?

EPA is in a better position to answer this question on the controls and protection of worker health and safety afforded by RCRA sites that may have accepted pre-1978

11e.(2) byproduct material for disposal from the U.S. Army Corps of Engineers under the FUSRAP program.

- c. Do RCRA sites require a performance assessment to demonstrate long-term protectiveness for the disposal of radionuclides?

We do not know of any performance assessment required by EPA under RCRA to demonstrate long-term protectiveness for disposal of radionuclides. However, EPA is in a better position to answer this question. We are aware that some RCRA sites accept NORM and exempt source material. As noted in response to question 4(a), RCRA regulations for management of hazardous wastes would also be protective for management of radioactive materials.

- d. What type of groundwater modeling is required of RCRA sites to ensure protection of groundwater quality for at least 1,000 years?

Our understanding is that EPA's requirements in 40 CFR 264, which cover RCRA facilities, do not require groundwater modeling. However, we understand that EPA does have policies that allow the appropriate use of groundwater modeling as a means of demonstrating compliance with the closure provisions at RCRA regulated units and the determination of groundwater Alternate Concentration Limits that are protective of human health and the environment. The specific applications and decisions based on the use of groundwater modeling will likely depend on the individual site conditions, and would be best answered by the EPA.

- e. What type of public involvement have RCRA sites provided to allow for public input to allow the disposal of radioactive waste in facilities that have not been permitted or designed for the disposal of Section 11e.(2) byproduct material?

EPA is in a better position to answer this question on public involvement in the development of RCRA site requirements.

5. Overall, which sites are more protective of public health, safety and the environment relative to the disposal of radioactive byproduct wastes, RCRA landfills or NRC-regulated and licensed disposal facilities?

Based on our knowledge of RCRA requirements, we believe that both RCRA landfills and NRC-regulated and licensed disposal facilities are protective. While RCRA requires a more prescriptive design approach and relies, for example, on active institutional controls for long-term control of a site, NRC uses a more performance-based approach, pursuant to the requirements in UMTRCA, such that active, on-going maintenance is unnecessary to protect the public health and safety and the environment from the effects of 11e.(2) byproduct material that has an extremely long half-life (e.g., about 80,000 year half-life for thorium-230). For that reason, EPA standards that have been incorporated in 10 CFR Part 40, Appendix A, require that uranium mill tailings impoundments be designed to be stable for 1,000 years, to the extent practicable, but in no case, less than 200 years. In general, we believe that NRC-regulated and licensed disposal facilities, because they are subject to requirements that focus on protection of public health, safety, and the environment from radiological hazards, may afford slightly more protection against radiological hazards.

6. In a [Director's Decision] dated March 26, 1999, NRC's Office of Nuclear Material Safety and Safeguards concluded that a waiver under the Comprehensive Environmental Response, Cleanup, and Liability Act of 1980 (CERCLA) does not apply to off-site FUSRAP disposal activities. What steps has the Commission taken to regulate off-site handling and disposal of Section 11e.(2) byproduct material?

The NRC has licensed Envirocare of Utah to provide disposal for this type of material. The Commission has also addressed the disposal of this type of material in impoundments at specific milling sites. Any material in the possession of an NRC or Agreement State licensee for disposal or for processing and disposal of the residuals from the processing in an NRC- or Agreement State-licensed facility is subject to the NRC's or Agreement State's jurisdiction and must meet all applicable Commission requirements. This includes, in the case of pre-1978 11e.(2) byproduct material, the applicable requirements in 10 CFR Parts 20 and 40 and the requirements for storage, processing, and disposal in the applicable NRC or Agreement State license.

7. Does NRC require additional Congressional direction or authority to regulate pre-1978 Section 11e.(2) byproduct material?

We believe legislation would be required to give NRC authority to regulate Section 11e.(2) byproduct material in the FUSRAP program. The NRC has not sought authority or the necessary resources to regulate that material, and we note that the House Appropriations Committee Report on the Energy and Water Development Appropriations Bill for FY 2000 contains language that the NRC is not intended to license the Corps of Engineers in the Corps' cleanup of contaminated FUSRAP sites. If Congress believes that the NRC should regulate the mill tailings resulting from activities not licensed by the NRC at the time or after UMTRCA was enacted, we stand ready to provide information and assistance to Congress in amending the Act. NRC would need additional resources to regulate pre-1978 section 11e.(2) byproduct material.

We trust this reply is responsive to your concerns. Please contact me if I can be of further assistance.

Sincerely,



Greta Joy Dicus

cc: The Honorable Carol M. Browner  
Administrator, Environmental Protection Agency

**ENVIROCARE** OF UTAH, INC.  
THE SAFE ALTERNATIVE

CD99-375

August 5, 1999

William J. Sinclair, Director  
Utah Division of Radiation Control  
168 North 1950 West  
Salt Lake City, Utah 84111-4850



Re: Management of FUSRAP Materials at Envirocare

Dear Mr. Sinclair:

As we discussed earlier today, Envirocare of Utah, Inc. (Envirocare) proposes to receive certain materials from the Formerly Utilized Sites Remedial Action Program (FUSRAP) sites, that were generated before 1978, for management in Envirocare's LARW cell. The United States Nuclear Regulatory Commission (NRC) has determined that these materials are not subject to NRC licensing under the Atomic Energy Act (AEA). FUSRAP materials consist of uranium mill tailings that were produced primarily during the United States' early development of nuclear materials as part of the Manhattan Engineering Project.

I have enclosed a copy of two (2) letters from the NRC that discuss the NRC's jurisdiction over these FUSRAP materials. In a letter dated April 28, 1999 from Chairman Jackson of the NRC to Charles Judd, President of Envirocare, the NRC states that there "are sites with pre-1978 11e.(2) byproduct material that are not under NRC authority, because these sites were not licensed by NRC at or after the time UMTRCA was passed" and that these materials are "under the jurisdiction of other Federal and State agencies." Chairman Jackson reaffirmed the position taken by the NRC in a letter dated March 2, 1998 from Robert L. Fomer, Special Counsel for the NRC, to Ann Wright, Counsel for the United States Army Corps of Engineers (USACE), in which he made clear that these materials are not licensed by the NRC and that the requirements of 10 CFR Parts 40 and 61 only apply to licensees disposing of licensed materials. The letter concludes by responding to the USACE's question regarding disposal of these materials at RCRA facilities, by stating that "there are no rules or regulations of the NRC that would preclude disposal of the described FUSRAP wastes at a RCRA site."

These materials are currently under the control of USACE at various FUSRAP sites, which were previously managed by the Department of Energy (DOE). The materials are pre-1978 byproduct materials that were not licensed by NRC at the time or after the time UMTRCA was passed, and, therefore, not subject to NRC authority, but subject to the jurisdiction of other Federal or State agencies. These materials are within the jurisdiction of the State of Utah for disposal at Envirocare's LARW facility. The materials are clearly within the definition of Utah Code §19-3-102 "Low-level waste," so Envirocare intends to receive them for management at our LARW facility.

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As you probably know, since the NRC has issued its determination, these materials have been disposed at hazardous waste disposal facilities in California and Idaho, as contemplated by Mr. Fonner's response to the USACE. Let me know if you would like additional information in this regard.

Further, as you know, the NRC has retained jurisdiction over the disposal of byproduct materials in accordance with Article II, Section E of the State's agreement with the NRC, as stated by Dr. William D. Travers in his letter of May 28, 1999 to you. However, the NRC has determined that these pre-1978 materials are not regulated by the NRC. Therefore, these materials are not subject to the NRC's retained jurisdiction.

In our discussions with the NRC regarding management of these materials, the NRC has informed Envirocare that as long as they are not placed into our 11e.(2) disposal cell, they are not subject to Envirocare's 11e.(2) byproduct materials license or regulations.

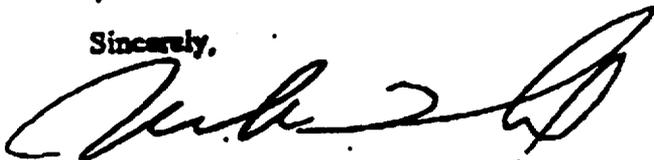
I understand that you will let me know shortly if the Division of Radiation Control has any objections to Envirocare's disposal of pre-1978 byproduct materials in our LARW cell. By copy of this letter, Envirocare is notifying the NRC of its intent to manage these FUSRAP materials in Envirocare's LARW disposal facility.

Finally, this request does not imply that Envirocare agrees with the NRC's determination that these pre-1978 byproduct materials are not subject to NRC's jurisdiction. In the event that the NRC determines at some time in the future that these materials are subject to NRC jurisdiction, Envirocare will manage these materials in accordance with such determination.

Jon Carter and George Hellstrom have discussed this matter with Fred Nelson of the Attorney General's office. Please contact George Hellstrom at (801) 532-1330 if you have questions regarding legal issues related to this matter. I believe that Ms. Maria Schwartz (301-415-1888) of the NRC Office of General Counsel could address legal issues at the NRC concerning this matter.

If you have any questions regarding this matter, please contact me at (801) 532-1330. Thank you.

Sincerely,



Mark Ledoux  
Corporate Radiation Safety Officer

Enclosures

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cc: Harold LeFevre (NRC), w/o enclosures  
Maria Schwartz (NRC), w/o enclosures