



# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

October 20, 2015

Mr. Christian Einberg, Chief  
Radioactive Materials Safety Branch  
Division of Materials Safety and State Agreements  
Office of Federal and State Materials and Environmental Management Programs  
October 15, 2015

Dear Mr. Einberg:

The State of Wyoming and its Department of Environmental Quality (WDEQ) greatly appreciate the opportunity to engage in discussions with you and NRC Staff regarding the State's plan to pursue an agreement under Section 274 of the Atomic Energy Act of 1954, as amended (AEA), with the United States Nuclear Regulatory Commission (NRC) whereby NRC will discontinue its AEA authority over source material milling and 11e.(2) byproduct material and the State will assume such regulatory authority. We are aware that the office of general counsel has raised a question regarding whether NRC can discontinue this limited authority in favor of a prospective or current Agreement State without discontinuing additional aspects of its AEA authority. It is the State's position that such limited authority can be discontinued in favor of an Agreement State without the need to cede additional authority to such State. In an effort to provide you with legal and regulatory precedent for your evaluation of this issue, the State of Wyoming has prepared the following analysis that demonstrates that this position is indeed correct.

Initially, the language of the AEA supports our position, *as it does not prohibit the transfer of such limited authority to a prospective or current Agreement State*. Section 274 (42 USC § 2021) specifically delineates the categories of materials and activities that the Commission may discontinue regulatory authority over to an prospective or current Agreement State (including 11e.(2) byproduct material) and which materials and activities it may not. Its language does not, however, prohibit the discontinuance of regulatory authority over individual categories and does not mandate that a prospective or current Agreement State take the full suite of permissible Section 274 materials and activities. Thus, since the AEA does not prohibit the State of Wyoming from taking regulatory authority over only uranium milling and 11e.(2) byproduct material, accordingly it is permissible.

Further, with respect to the its plain language, the AEA prescribes an intent-based definition of 11e.(2) byproduct material that requires that a licensee extract or concentrate source material from ores *primarily for their source material content*. Essentially, this intent-based definition not only created the unique class of AEA materials known as 11e.(2) byproduct material but, in doing so, specifically recognizes a separate type of activity known as *uranium milling*. It is clear that this was Congress' intent, as the Commission's regulations at 10 CFR § 40.4 implementing the provisions for source material milling define "uranium milling" as "any activity that generates [11e.(2)] byproduct material." As such, it is clear that the Commission, when implementing the AEA's provisions for 11e.(2) byproduct material, intended to address a separate category of materials (11e.(2) byproduct material) *and activities* uranium (source material) milling. *See* 10 CFR Part 40, Appendix A. Therefore, logically, when the AEA speaks to discontinuance of regulatory authority over 11e.(2) byproduct material, it speaks to a separate category of materials *and activities* that may be ceded to a prospective or current Agreement State.





When enacting the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) as an amendment to the AEA, it was Congress' clear intent that source material milling and the resulting 11e.(2) byproduct material (tailings and other wastes associated with source material milling) be considered under a separate regulatory program. Initially, the purpose of UMTRCA was to grant NRC exclusive, federal preemptive authority over these items. These categories of material and activities were (and are) unique among the materials regulated under the AEA, because they are not defined solely in terms of its radiological characteristics, but instead is defined broadly enough to encompass "all wastes"—both radioactive and *non*-radioactive—resulting from uranium *ore* processing at AEA-licensed uranium recovery facilities.<sup>1</sup> Since this new definition of "*byproduct material*" is intended to be expansive and to cover the broad range of wastes associated with uranium milling, the tailings and *all* other wastes associated with uranium recovery produced at AEA-licensed uranium milling facilities are referred to as "11e.(2) *byproduct material*." *The relationship between source material and 11e.(2) byproduct material is the fundamental driving force behind uranium recovery regulations noted above, relevant guidance and policies, and licenses/permits from 1978 to the present.*

When speaking of "all wastes" associated with source material milling, 11e.(2) byproduct material has not been limited to mill tailings, but rather extends to *all* wastes generated at an AEA-licensed source material milling facility. For example, as noted in NUREG-0706 entitled *Generic Environmental Impact Statement on Uranium Milling*, source material ore that is delivered to a milling facility that is not processed at any time can become 11e.(2) byproduct material if it is determined at some time that it has become a waste. See NUREG-0706, Appendix A, p. 88. This class of waste materials applies to milling equipment, buildings, chemicals, and all other milling wastes. This class of materials even applies to generated yellowcake if the licensee determines that it cannot sell such material or does not wish to remove it from the site. Since Congress' intent was to create a separate regulatory program for source material milling and 11e.(2) byproduct material, the source material generated at a source material milling facility is treated differently than source material generated from activities such as side-stream recovery or water treatment.

This fact also is demonstrated by NRC's routine practice of issuing two classes of licenses; source material licenses for generation of source material without the intent to generate it from ores primarily for its source material content and source material milling licenses for generation of source material from ores primarily for their source material content. NRC has issued source material licenses that cover source material generation activities such as side-stream recovery at a variety of mineral recovery facilities (e.g., copper, molybdenum, rare earths facilities), drinking water treatment, and mine de-watering operations. However, none of these activities generate 11e.(2) byproduct material as there is no source material generation from ores primarily for their source material content. Thus, such "source material" licenses are treated differently from source material milling licenses where 11e.(2) byproduct material is generated. Indeed, NRC has a separate "Uranium Recovery Branch" that deals with a separate class of licenses (i.e., source material milling licenses). Thus, as noted above, the Commission's practices under the AEA demonstrate that source material milling and 11e.(2) byproduct material are treated as a separate class of licensees with a separate, targeted regulatory program (i.e., 10 CFR Part 40, Appendix A). Additionally to separate source material milling and 11e.(2) byproduct material into separate classifications would be contradictory to NRC historical operation.

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<sup>1</sup> See 57 Fed. Reg. 20,525, 20,526 (1992) (hereinafter "Exhibit 17").

There are several examples where this intent has been used in the context of 11e.(2) byproduct material with respect to Agreement States. The first example is the State of Nebraska, where the State has assumed regulatory authority over the class of materials known as “source material.” Nebraska’s Section 274 Agreement with the Commission does not, however, include 11e.(2) byproduct material and source material milling (which is specifically defined in other Agreements such as that for the State of Utah). For this reason, the State of Nebraska does not have regulatory authority over Cameco Resources’ Crow Butte in situ leach uranium recovery (ISR) facility, as this facility is currently licensed by NRC. Further, there is no connection whatsoever between the category of “source material” under the AEA and this NRC-licensed facility, as Nebraska cannot and has not issued a license/permit to regulate the source material generated at this facility; but rather, NRC regulates all AEA materials and activities conducted at this facility. This regulatory authority extends to the subsurface source material extraction, the surface source material milling and yellowcake generation, and the resulting 11e.(2) byproduct material. Based on this, it is apparent that the above-discussed position that source material milling and 11e.(2) byproduct material are separate from “source material” and regulatory authority over these can be ceded independently to a prospective or current Agreement State.

Another example is the State of Utah’s Section 274 Agreement with the Commission. Prior to 2004, Utah possessed an Agreement similar, if not identical, to the Agreement currently in place for Nebraska. In short, at that time, Utah did not possess regulatory authority over 11e.(2) byproduct material and source material milling. Thus, at that time, Utah did not and could not regulate source material milling facilities, including but not limited to, the current Energy Fuels White Mesa Mill in Blanding, Utah (which was a licensee of NRC). NRC retained authority over all aspects of that facility, including the generated source material and the resulting 11e.(2) byproduct material in a manner similar to the Crow Butte facility in Nebraska. However, in 2004, Utah sought and assumed regulatory authority over source material milling and 11e.(2) byproduct material and, subsequently, received a transfer of this facility’s license from NRC. As is the case with Nebraska, NRC has identified a separate category of materials and activities under the AEA and, in 2004, specifically identified “uranium milling” as a separate amendment to Utah’s Section 274 Agreement. Therefore, this example also demonstrates that the Commission can cede regulatory authority to a prospective or current Agreement State over only source material milling and 11e.(2) byproduct material.

Another example is the State of New Mexico’s Section 274 Agreement with the Commission. Effective May 1, 1974, the State of New Mexico entered into a Section 274 Agreement with the Commission. This Agreement sought regulatory authority over byproduct material (then designated as 11e.(1) byproduct material), source material, and special nuclear material in quantities not sufficient to form a critical mass. As with Idaho, New Mexico’s Agreement was executed before Congress’ passage of UMTRCA and the creation of 11e.(2) byproduct material generated by AEA- licensed source material recovery as AEA materials and operations. However, New Mexico continued to regulate uranium mills within its boundary until UMTRCA’s passage. Thus, the term “byproduct material” in the 1974 Agreement did not explicitly or implicitly include regulatory authority over 11e.(2) byproduct material.



Due to this factor and up until the Governor's request, New Mexico continued to regulate the uranium mills in its jurisdiction under the existing 1974 Agreement. However, upon receipt of the Governor's request to relinquish this authority, the process as articulated in SA-115 entitled *Termination of a Section 274b Agreement* commenced. A 1986 Commission decision on the Governor's request to relinquish regulatory authority over 11e.(2) byproduct material and source material recovery stated, "its Agreement does not include a needed amendment to cover the continued regulation by the State of the byproduct material (as defined in Section 11e.(2) of the [Atomic Energy] Act) produced by the extraction or concentration of source material from source material ore. *For this and other reasons, the Governor of the State has advised the Commission that the State is no longer in a position to administer that portion of its Agreement State program and has requested its return to Commission jurisdiction.*"<sup>2</sup> This example shows that source material milling and 11e.(2) byproduct material are defined as separate categories of regulatory authority that may be assumed by Agreement States or, in this case, ceded back to NRC.

In summary, it is the State of Wyoming's position that it may apply to NRC to assume regulatory authority over source material milling and 11e.(2) byproduct materials based on the language of the AEA, the legislative intent underlying UMTRCA, the Commission's implementing regulations at 10 CFR Part 40, Appendix A and the precedent established by the aforementioned examples of the application of such regulations and applicable guidance. The State appreciates NRC Staff's efforts on its application thus far and looks forward to proceeding forward with enactment of its empowering statute and implementing regulations with NRC Staff's assistance and input. Included with this letter are Governor Mead's request and NRC response and acceptance to proceed with the agreement state as proposed. Following receipt of the stated NRC letter, the State Of Wyoming has expended considerable resources to move this joint agreement forward. The State Of Wyoming looks forward to the continued transfer of this program. Thank you for your time and consideration in this matter.

Sincerely,



Kyle Wendtland  
Administrator  
Land Quality Division

cc: Todd Parfitt  
Eva La  
Ryan Schierman  
Duncan White  
Stephen Poy  
Joan Olmstead

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<sup>2</sup> After the passage of UMTRCA and the creation of a separate regulatory program for "source material recovery" and "11e.(2) byproduct material," Agreement States currently regulating source material recovery facilities were given an opportunity to apply for and obtain an amendment to its then-current Section 274 Agreement to add this program. As shown above, New Mexico did not choose to obtain this amendment.



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

CHAIRMAN

April 21, 2015

The Honorable Matthew H. Mead  
Governor of Wyoming  
Cheyenne, WY 82002

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DIR. PAR. FTH

Dear Governor Mead:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter of February 27, 2015, in which you express your intent to pursue an agreement between the NRC and the State of Wyoming pursuant to Section 274b of the Atomic Energy Act of 1954, as amended. NRC staff is available to provide guidance to the State of Wyoming in its development of an application. If approved by the Commission, Wyoming would assume regulatory authority over radiological and non-radiological hazards adequate to protect the public health and safety and the environment with respect to byproduct material as defined in Section 11e.(2) of the Atomic Energy Act and facilities that generate this material. This is premised on the State's desire to assume regulatory responsibility for such material.

As required by the Act, the NRC staff will review the application and conduct an assessment of the compatibility of the Wyoming program with the NRC's program and the adequacy of Wyoming's program to protect public health and safety with respect to the materials covered by the proposed agreement. This process generally takes 52 weeks. I want to assure you that the NRC staff will work diligently to complete its review in an expeditious manner.

After its review, the NRC staff will provide your application to the Commission. If the Commission approves the proposed agreement, the NRC will publish the text and a summary of its assessment in the *Federal Register* for public comment. The Act requires that the proposed agreement be published once each week for 4 consecutive weeks. A press release concerning the State's request will also be issued at that time. After the expiration of the comment period, the Commission will consider any comments received and make a final decision on the request. You will be notified promptly of our decision, and the NRC staff will coordinate with Wyoming's staff to establish an effective date for the agreement.

The Commission welcomes the State's interest in becoming an Agreement State and looks forward to the continued excellent relationship that the NRC and the State of Wyoming have enjoyed in the past.

Sincerely,

Stephen G. Burns

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APR 27 2015

GOVERNOR'S OFFICE



MATTHEW H. MEAD  
GOVERNOR

THE STATE OF WYOMING



STATE CAPITOL  
CHEYENNE, WY 82002

## Office of the Governor

February 27, 2015

Stephen G. Burns, Chairman  
U.S. Nuclear Regulatory Commission  
Mail Stop O-16G4  
Washington, DC 20555-0001

RE: Letter of Intent to Enter into an Agreement with the U.S. Nuclear Regulatory Commission

Dear Chairman Burns,

Wyoming has a strong uranium mining and milling industry and we enjoy a constructive relationship with the U.S. Nuclear Regulatory Commission (NRC). Wyoming recently passed enabling legislation allowing us to become an Agreement State with the NRC.

Pursuant to §274(b) of the Atomic Energy Act of 1954, as amended, Wyoming intends to pursue an agreement with the NRC to regulate source material and byproduct material (as defined in §11e.(2) of the Act).

I authorize Todd Parfitt, Director of the Wyoming Department of Environmental Quality, to coordinate the process with your staff. Director Parfitt can be contacted by telephone at (307) 777-7937, or by email at [todd.parfitt@wyo.gov](mailto:todd.parfitt@wyo.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Matthew H. Mead".

Matthew H. Mead  
Governor

MHM:mdm

cc: The Honorable Mike Enzi, U.S. Senate  
The Honorable John Barrasso, U.S. Senate  
The Honorable Cynthia Lummis, U.S. House of Representatives  
Todd Parfitt, Director, Wyoming Department of Environmental Quality