DD-00-06

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS

William F. Kane, Director

In the Matter of Docket No. __-___

Envirocare of Utah and Snake River Alliance

I INTRODUCTION

On February 24, 2000, Snake River Alliance and, on March 13, 2000, Envirocare of Utah, Inc. (the Petitioners) filed separate petitions pursuant to 10 CFR 2.206 addressed to Dr. William Travers, Executive Director for Operations, of the U.S. Nuclear Regulatory Commission (NRC).[1] These petitions, which have been addressed together in this decision, requested that the NRC assert jurisdiction over the disposal of mill tailings from Formerly Utilized Sites Remedial Action Program (FUSRAP) sites.

II BACKGROUND

Beginning in 1974, the Department of Energy (DOE) initiated the FUSRAP program in order to remediate contamination at a number of sites at which the Manhattan Engineering District and the Atomic Energy Commission performed work as part of the nation's early atomic energy program. By 1997, 46 sites were covered under the program, with remediation complete at 25 of those sites. Remediation of the other 21 sites was incomplete. In the Energy and Water

[1]In addition to the two petitions, the NRC received a number of other submissions from various parties. The United States Army Corps of Engineers submitted a preliminary response to the petitions on April 11, 2000. The Corps filed a more detailed response on June 29, 2000. The Corps filed a further response on November 2, 2000. On April 10, 2000, Envirosafe of Idaho, Inc. responded to the February 24, 2000 petition submitted by Snake River Alliance. Envirosafe, joined by the Environmental Technology Council, later submitted a detailed analysis of the issues raised by both petitions on May 19, 2000. The National Mining Association submitted an argument and documents in support of the two petitions on July 18, 2000. Finally, in response to the above submissions, Envirocare filed three supplements to its petition, one on May 5, 2000, the second on August 30, 2000 (Envirocare filed a corrected version of its August 30 supplement on September 13, 2000) and the final supplement on October 18, 2000.

Development Appropriations Act for Fiscal Year 1998, Congress transferred administration of FUSRAP to the U.S. Army Corps of Engineers (the Corps or USACE). Congress continued the Corps' responsibility for administration of the FUSRAP program by enacting the Energy and Water Development Appropriations Act for Fiscal Year 1999. The latter Act specified that remedial actions undertaken by the Corps under FUSRAP would be subject to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan. Similar language appeared in the Energy and Water Development Appropriations Act for Fiscal Year 2001.

Four years after the FUSRAP program was initiated by DOE, the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) [P.L. 95-604] was enacted. In enacting UMTRCA, Congress had two general goals: (1) providing a remedial-action program to stabilize and control mill tailings at various identified inactive mill sites; and (2) ensuring the adequate regulation of mill tailings at mill sites that were active and licensed by the NRC, and the cleanup of those sites after operations ceased. As then Chairman Hendrie of the NRC explained to Congress, the agency at the time did not have direct regulatory control over uranium mill tailings. The tailings themselves did not fall into any category of NRC-licensable material. As of 1978, NRC was regulating tailings at active mills indirectly through its licensing of source material milling operations under the Atomic Energy Act of 1954 (AEA), largely as a result of the enactment of the National Environmental Policy Act (NEPA). Operating uranium mill licenses were conditioned to require proper disposition and stabilization for environmental issues after operations had ceased. However, tailings were not source material licensable by the NRC. Thus once the underlying source material license terminates, there would no longer be a clear basis for regulating the tailings.[2]

To address the problem of existing unregulated tailings piles, Congress enacted Title I of UMTRCA, which specified inactive processing sites for remediation by the Secretary of Energy, and authorized the Secretary to designate additional sites for remediation within one year of the enactment of UMTRCA. To address the problem of tailings produced at active, NRC-licensed sites, Congress enacted Title II of UMTRCA. Title II amended the definition of byproduct material to include mill tailings and added specific authorities for the Commission to regulate this new category of byproduct material at licensed sites.

A number, but not all, of the FUSRAP sites contain tailings resulting from the processing of ores for the extraction of uranium or thorium. The residuals typically have most of the uranium or thorium removed, but still contain other radioactive elements in the decay chains for uranium and thorium, especially thorium-230 and radium. Mill tailings also can contain hazardous chemicals used in the processing to extract uranium or thorium, and these can include nitric, hydrofluoric, and sulfuric acids; ammonia; diesel fuel; and benzene. The standards applicable to the disposal of mill tailings were promulgated by the U.S. Environmental Protection Agency (EPA) and NRC conformed its regulations to these standards.[3] For the non-radiological

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[2] Uranium Mill Tailings Radiation Control Act of 1978: Hearings on H.R. 11698, H.R. 12229, H.R. 12938, H.R. 12535, H.R. 13049, and H.R. 13650 (hereinafter "UMTRCA Hearings I") Before the Subcomm. on Energy and Power of the House Comm. on Interstate and Foreign Commerce, 95th Cong. 400 (1978) (statement of Joseph M. Hendrie, Chairman, NRC).

[3] See 10 CFR Part 40, Appendix A; 50 Fed. Reg. 41,852 (1985).

components of mill tailings, Congress directed EPA in UMTRCA to develop standards that offered the same level of protection as Resource Conservation and Recovery Act (RCRA) Subtitle C facilities.[4]

Director's Decision DD-99-7

In 1999, the NRC issued a Director's Decision on an issue associated with the Corps' cleanup activities: whether the Corps needs an NRC license to conduct remediation activities at FUSRAP sites.[5] The Natural Resources Defense Council filed a petition requesting that the NRC exert licensing authority over the Corps at FUSRAP sites. The NRC denied the petition and declined to require the Corps to obtain a license for activities conducted at FUSRAP sites. In discussing the NRC's duties under UMTRCA, the Director concluded that UMTRCA did not impose responsibilities on the NRC for remediation activities involving residual material produced in an activity not under NRC license prior to enactment of UMTRCA. "Because the residual material at many FUSRAP sites was generated in activities that were not licensed when UMTRCA was enacted, or thereafter, NRC today has no basis to assert any regulatory authority over handling of the residuals at those sites."[6]

The Director's Decision focused on whether NRC should regulate the Corps' on-site FUSRAP activities. The decision did not address the NRC's authority in detail to require a license when FUSRAP material is moved off the site for disposal.

Petitioners' Arguments

Petitioners Envirocare and Snake River Alliance take issue with the NRC's interpretation of its authority under UMTRCA with regard to mill tailings that were not under license when UMTRCA was enacted or thereafter. They present a number of arguments for why the NRC should assert jurisdiction over the disposal of mill tailings from FUSRAP sites. The Petitioners argue that the statutory language of UMTRCA unambiguously requires the NRC to regulate all mill tailings material, including FUSRAP material. According to the Petitioners, the statute does not indicate that any significant category of mill tailings should be excluded from NRC regulation. Specifically, the Petitioners state that section 84 of the AEA, as amended by UMTRCA, compels the NRC to assert jurisdiction over any material that falls within the definition of byproduct material.

Petitioner Envirocare also argues that the legislative history of UMTRCA demonstrates clear Congressional intent that the NRC should regulate all mill tailings material, including material from FUSRAP sites. Envirocare concedes that Congress may not have specifically intended the NRC to regulate FUSRAP material. However, according to Envirocare, since Congress intended to regulate all material that fit the definition of section 11e.(2) byproduct material, Congress could not have intended to exclude FUSRAP material from NRC regulation. In

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[4]See Atomic Energy Act § 84, 42 U.S.C. § 2114, as amended by UMTRCA, Pub. L. No. 95-604, 92 Stat. 3033.

[5]United States Army Corps of Engineers, DD-99-7, 49 NRC 299 (1999).

[6]Id. at 308.

addition, Envirocare asserts that Congress recognized the serious health and safety problems posed by uranium mill tailings, and therefore would not have chosen to exclude a category of tailings from the control of the regulatory authority granted by UMTRCA.

Next, both Petitioners contend that the NRC's regulations, specifically 10 CFR 40.2a, do not exempt FUSRAP material from NRC jurisdiction. Additionally, the Petitioners express their concern that, absent NRC regulation, mill tailings from FUSRAP sites would go unregulated because they fall outside the jurisdiction of the EPA under RCRA and cannot be regulated by the states because Congress preempted the field of mill tailings when it enacted UMTRCA. Petitioner Snake River Alliance specifically notes that Idaho, which is not an Agreement State, lacks the authority to regulate the disposal of byproduct material, which, in the Petitioners' view, would leave the disposal of FUSRAP mill tailings at sites such as Envirosafe unregulated. In supplemental comments dated May 5, 2000, Petitioner Envirocare argues that, under the Commission's interpretation of UMTRCA, the disposal of mill tailings from FUSRAP sites is subject to neither federal nor state health and safety regulation, and therefore NRC's approach to these matters leaves the disposal of these materials entirely unregulated.

On August 30, 2000, Envirocare submitted a second supplement to its petition.[7] This supplement largely reiterates the arguments made by Envirocare in its first two submissions. However, this supplement also seeks to rebut the arguments made by the Army Corps of Engineers and raises some new arguments. In this supplement, Envirocare argues that the NRC interpretation of UMTRCA would leave the NRC without jurisdiction over FUSRAP material even when it is disposed of at a NRC-licensed facility. Envirocare notes that, prior to 1998, when the Corps took over FUSRAP, all disposal of FUSRAP mill tailings material occurred either under DOE supervision or at a NRC-licensed facility. Additionally, Envirocare asserts that the NRC has taken inconsistent positions regarding whether mill tailings material from FUSRAP sites can be considered section 11e.(2) byproduct material. Envirocare also argues that FUSRAP was not listed as one of the specific exclusions from UMTRCA, although Congress did choose to exclude other types of sites in UMTRCA section 101(6). Finally, on October 18, 2000, Envirocare submitted comments on responses provided by the NRC to questions posed by the Senate Committee on Environment and Public Works.

The Corps' Response

The Corps submitted an initial response to the petitions on April 11, 2000. The Corps supplemented its response in greater detail on June 29, 2000. The Corps asserts that the NRC's interpretation of UMTRCA as only extending NRC regulatory authority over licensed activity is reasonable. First, the Corps argues that the statutory language of UMTRCA evinces a Congressional intent to limit the NRC's jurisdiction over tailings to current and future licensees. The Corps points to the amended language of section 83 of the AEA, which limits the NRC jurisdiction over byproduct material to "any license issued or renewed after the effective date of this section." The Corps points out that no language in the statute contradicts the prospective language of amended section 83.

[7]On September 13, 2000, Envirocare submitted a corrected version of its August 30, 2000 supplement to the petition.

The Corps next asserts that the legislative history of UMTRCA supports the conclusion that the NRC's authority under Title II of the Act extends prospectively, to licensees who held an NRC license as of the effective date of UMTRCA or thereafter. The Corps notes that, in numerous sections of the legislative history, Congress used language indicating that the NRC's authority to regulate the cleanup of residual material was limited by UMTRCA to tailings resulting from then-effective and future licensed activities. Additionally, the Corps points out that Congress considered retroactive application of Title II of UMTRCA and instead decided to impose the new requirements of section 83 of the AEA on current and future licensees. The Corps stresses that Title I and Title II of UMTRCA were originally introduced as separate legislation by the DOE and the NRC. According to the Corps, this separation and the creation of two separate programs under UMTRCA is evidence that Congress did not intend for Title II requirements to apply to sites that were inactive as of the effective date of the statute.

Next, the Corps argues that Congress has had numerous opportunities through legislation to change the FUSRAP program or UMTRCA to state that the NRC has regulatory authority over FUSRAP mill tailings material. Despite passing amendments and other legislation relating to the FUSRAP program, the Corps argues that Congress has never indicated mill tailings material from FUSRAP sites must be regulated by the NRC under the AEA.

Additionally, the Corps also argues that the preemption argument made by the Petitioners is irrelevant because preemption in the field of radioactive materials is limited to those materials over which the NRC has regulatory authority. Since the NRC lacks regulatory authority over FUSRAP material, states are not preempted from regulating the disposal of that material. The Corps notes that naturally occurring radioactive materials (NORM) and technologically enhanced NORM (TENORM) are also not regulated under the AEA. Finally, the Corps asserts that, under the Petitioner's interpretation of UMTRCA, mixed waste FUSRAP material containing both AEA and RCRA waste may have no authorized disposal site.

The Corps submitted a response to Envirocare's August 30, 2000, petition supplement on November 2, 2000. In this supplement, the Corps refutes Envirocare's argument that DOE always disposed of FUSRAP material at a NRC-licensed site, citing two specific occasions of disposal of FUSRAP material at hazardous waste disposal sites. Additionally, the Corps clarifies its position that the Title II program created under UMTRCA is limited to regulation of licensed or actively operating mills as of 1978, and that some of the FUSRAP material falls outside this scope.

Envirosafe of Idaho's Response

Envirosafe of Idaho, Inc. submitted a response to the Snake River Alliance petition on April 10, 2000. On May 19, 2000, Envirosafe, joined by the Environmental Technology Council (hereinafter Respondents), submitted a response to both petitions, requesting that the NRC deny the relief sought in the petitions. The Respondents first argue that Congress expressly decided not to include the FUSRAP sites under UMTRCA because DOE was already addressing those sites under its AEA and NEPA authority. The Respondents note that, since the passage of UMTRCA, Congress has had numerous opportunities to state its intent to place FUSRAP sites under NRC authority, but has not done so. Instead, Congress transferred

FUSRAP to the Corps of Engineers and directed that remediation is subject to the provisions of CERCLA.[8]

Contrary to the argument by the Petitioners, the Respondents assert that the legislative history of UMTRCA demonstrates a clear Congressional intent to exclude FUSRAP from the NRC's regulatory authority under UMTRCA. The Respondents claim that Congress decided to exclude the FUSRAP sites from UMTRCA and instead oversee the FUSRAP program through the appropriations process. Additionally, the Respondents note that Title I of UMTRCA was limited to the 22 sites listed and any other sites added within one year of enactment.[9] Since the FUSRAP sites were not added, they do not fall under Title I of UMTRCA. Finally, the Respondents argue that the fact that tailings from FUSRAP sites may be disposed of at sites with a disposal permit under RCRA ensures that the materials will be disposed of in an environmentally sound manner.

National Mining Association Comments

On July 18, 2000, the National Mining Association (NMA) submitted documents, including an Addendum to the White Paper entitled "Recommendations for a Coordinated Approach to Regulating the Uranium Recovery Industry" (Aug. 19, 1999), for consideration in connection with the Petitioners' requests. The NMA supports the Petitioners' position that the NRC should assert jurisdiction over the disposal of FUSRAP material.

First, the NMA agrees with the NRC's position that material at a FUSRAP site is not subject to regulation by the NRC, since the FUSRAP program continues to fall under the province of DOE. Therefore, any remediation or disposal of FUSRAP material *on-site* does not require an NRC license. However, the NMA argues that the NRC should regulate the disposal of FUSRAP tailings *off-site*. In the Addendum to the White Paper, the NMA reiterated many of the arguments made by the Petitioners, but also raised additional arguments for NRC jurisdiction over FUSRAP material.

The NMA asserts that the plain language of UMTRCA does not reveal any temporal limitation on the materials that qualify as section 11e.(2) byproduct material. According to the NMA, Congress did not define section 11e.(2) byproduct material in terms of whether it was produced prior to 1978 and pursuant to an AEA license. Additionally, the NMA claims that section 83 of the AEA does no more than prescribe certain provisions which must be included in all NRC licenses issued after the effective date of UMTRCA.

Next, the NMA argues that DOE's determination that FUSRAP tailings meet the definition of section 11e.(2) byproduct material is entitled to deference. The NMA bases this argument on the fact that UMTRCA grants DOE the authority to determine what materials constitute "residual

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[8]The House version of the authorization bill for Fiscal Year 2000 stated that, in appropriating funds to the Corps for site remediation under FUSRAP, the Committee did not intend that the Corps would be required to obtain an NRC license. *See* H.R. REP. NO. 106-253 at 77. The conference report on the bill did not repeat this explanatory language, nor did it contradict it.

[9]Congress added additional sites through later legislation.

radioactive materials," a term which encompasses byproduct material. The NMA also relies upon a 1992 Federal Register notice, in which it claims the NRC asserted that some FUSRAP materials constitute section 11e.(2) byproduct material.[10]

III. DISCUSSION

The petitioners' section 2.206 petitions raise a most difficult question of statutory construction. On the one hand, UMTRCA contains ostensibly sweeping language -- i.e., it directs the NRC to regulate "byproduct material" in section 84 of the AEA, and in section 11e.(2), it defines "byproduct material" to include tailings "from any ore processed primarily for its source material content." This statutory language arguably covers FUSRAP material, which derives, in part, from processing ore for source material content. On the other hand, when enacting UMTRCA Congress was fully aware of DOE's FUSRAP sites and nonetheless left them out of the Act, despite establishing an elaborate statutory regime for decontaminating other defunct sites under a program administered by the DOE . Moreover, in delineating the NRC's duties under UMTRCA in section 83 of the AEA, Congress focused on active or NRC-licensed sites. Congress did not purport to grant the NRC general regulatory authority over mill tailings at defunct sites.

The FUSRAP question has come up on several occasions in recent years. During this time, the NRC has consistently disclaimed NRC jurisdiction, in correspondence with the Congress and with the public. This section 2.206 proceeding is the NRC's first opportunity to fully consider and explain its position in a systematic fashion.

With the assistance of the NRC's Office of the General Counsel, I have carefully reviewed UMTRCA, its history, and the voluminous submissions of the various participants in the section 2.206 proceeding. I conclude that UMTRCA mandates no change in the NRC's current practice. Not only did Congress not include in UMTRCA clear language giving the NRC power to regulate most FUSRAP material, Congress also has been aware of the NRC's FUSRAP position for several years, and has not stepped in to override it. To my knowledge, the NRC's failure to exercise UMTRCA authority over FUSRAP material has created no public health and safety problem. State and EPA regulatory authorities are up to the task of regulating the safe disposal of FUSRAP material.

With this general outline in mind, I turn now to the Petitioners' various concerns and to my specific reasons for rejecting NRC jurisdiction over most FUSRAP material.

A. Statutory Provisions of UMTRCA

The question before the Commission is whether its regulatory jurisdiction extends to those ore processing residuals or mill tailings currently being remediated by the Corps under FUSRAP. Until 1998, the DOE had been conducting the remediation of the FUSRAP sites through annual appropriations for decontamination and remediation, not pursuant to its Title I authority under UMTRCA. Title I of UMTRCA authorized DOE to perform remedial actions at 22 designated processing sites. In addition, the Secretary was directed to, within one year of enactment of the

[10] See 57 Fed. Reg. 20,527 (May 13, 1992).

Act, designate all other processing sites containing residual radioactive materials produced under Federal contract, but not under license by the NRC as of January 1, 1978, which he determined required remedial action to carry out the purposes of the Act.[11] As detailed below in the discussion of UMTRCA's legislative history, a large number of inactive sites, not under license by the Commission as of January 1, 1978, and containing such residual materials and subsequently remediated under the FUSRAP program, were known to both DOE and the Congress at the time of enactment of UMTRCA,[12] yet they were never designated as processing sites for remediation under UMTRCA.

Title II of UMTRCA addresses the NRC's role. Title II authorized the NRC to regulate mill tailings at sites with licenses issued or in force on or after the effective date of that part of the statute. The statutory language makes no mention of FUSRAP material in either Title I or Title II and does not indicate that the NRC has authority to require licenses for disposal of FUSRAP material. NRC regulation of FUSRAP material (mill tailings at defunct sites not licensed by the NRC) does not fit comfortably the DOE-NRC division of labor set up by UMTRCA.

The Petitioners, however, assert that section 84 of the AEA is a broad grant of authority to the NRC over all byproduct material, including tailings at FUSRAP sites. The reasoning behind this assertion is as follows: UMTRCA amended the definition of "byproduct material" in section 11e.(2) of the AEA to include mill tailings. Section 84 requires the Commission to ensure that the management of section 11e.(2) byproduct material is carried out in a manner that protects the public health and safety and the environment. Therefore, according to the Petitioners, the Commission must regulate all materials that share the characteristics of mill tailings, regardless of whether or not they were produced under an NRC license. We decline to read section 84 in such isolation from the other provisions of UMTRCA. A review of UMTRCA as a whole (both Title I and Title II), its legislative history, and the structure of remediation activities created by the separate titles, supports the conclusion that the NRC lacks jurisdiction over most FUSRAP material.

As noted above, UMTRCA divided the responsibility for mill tailings cleanup between DOE and the NRC. UMTRCA assigned responsibility for licensed sites to the NRC and responsibility for unlicensed (defunct) sites to DOE. Given this statutory structure, it seems unlikely that Congress sub silentio intended the NRC to take on responsibility for FUSRAP material at unlicensed sites. The key substantive UMTRCA provision applicable to the NRC -- section 83a of the AEA -- reinforces this view. Section 83a specifies particular "terms and conditions" that the NRC must include in licenses "issued or renewed after the effective date of this section," and goes on to say that any "license which is in effect on the effective date of this section and which is subsequently terminated without renewal" must contain the same terms and conditions. Section 83a's focus, in short, is on facilities "licensed" on or after UMTRCA's effective date. Neither section 83a nor any other UMTRCA provision directs the NRC to regulate unlicensed FUSRAP sites.

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[11]UMTRCA § 102, Pub. L. No. 95-604, 92 Stat. 3023.

[12]UMTRCA Hearings I at 302.

The NRC recognizes that the drafting of section 83a. has created confusion regarding the effective date of NRC's authority. As Petitioner Envirocare correctly points out, the effective date of section 83 was three years after UMTRCA's enactment in 1978. As originally passed, section 83a imposed certain terms and conditions on any "license in effect on the date of enactment" of the section. This language caused severe interpretive difficulties regarding the timing of Agreement State responsibilities under the Act. These Agreement State issues were addressed in a 1979 amendment to UMTRCA, changing its effective date to 1981.[13] The precise effective date of UMTRCA is irrelevant since the NRC has never had jurisdiction over FUSRAP material.

Questions have been raised regarding the appropriate term to use to identify the ore processing residuals that fall outside of NRC jurisdiction. Envirocare points out in its supplemental petition that, at various times, the NRC has referred to this material as section 11e.(2) byproduct material, non-11e.(2) material, pre-1978 11e.(2) material, FUSRAP mill tailings, and FUSRAP ore processing residuals. The issue of the proper designation for this material was specifically raised in a recent Commission decision. However, the Commission did not find it necessary to address the issue at that time.[14] From NRC's perspective, the material in question constitutes pre-UMTRCA tailings resulting from the processing of ores for the extraction of uranium or thorium not covered by the AEA. Although the material may be chemically, physically, and radiologically similar to section 11e.(2) byproduct material, it is not material over which NRC has jurisdiction.

The bottom line here is that we face a statute of considerable complexity and ambiguity. Contrary to the Petitioners' view, the questions they raise about FUSRAP cannot be answered by resort to UMTRCA's alleged "plain meaning." In analyzing the meaning of a statute, the "statute is to be considered in all its parts. . . ."[15] Recently, the Supreme Court in FDA v. Brown & Williamson Tobacco Corp.[16] held that "a reviewing court should not confine itself to examining a particular statutory provision in isolation. The meaning -- or ambiguity -- of certain words or phrases may only become evident when placed in context."[17]

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[13]See Pub. L. No. 96-106, 93 Stat. 800.

[14]International Uranium (USA) Corp., CLI-00-1, 51 NRC 9, 14 (2000).

[15]Lexecon Inc. v. Milberg Weiss Bershad Hynes & Lerach, 523 U.S. 26, 36 (1998).

[16]120 S.Ct. 1291 (2000).

[17]Id. at 1300-01. Brown & Williamson involved an attempt by the Food and Drug Administration (FDA) to regulate tobacco under the Food, Drug and Cosmetic Act (FDCA). Although the literal words of the FDCA appeared to support the FDA's position, the Court looked beyond the literal words and also examined the history and structure of the Act, as well as the FDA's prior administration of the Act and concluded that the FDA lacked jurisdiction to regulate tobacco.

Ambiguity in a statute arises when the language is capable of more than one plausible interpretation.[18] As demonstrated by the numerous positions taken by the Petitioners, the Respondents, the Corps, and the NMA, the language of UMTRCA is far from clear and can plausibly be subject to more than one interpretation. When the plain language of a statute is "obscured by ambiguity," then "[l]egislative history can be a legitimate guide for statutory interpretation."[19] It is to that history I now turn.

B. Legislative History of UMTRCA

UMTRCA was the result of an investigation of inactive uranium mill tailings sites in western States beginning in 1974, and a follow-up series of engineering assessments of 22 sites. On the basis of these studies, the Carter Administration proposed legislation to authorize a remedial action program to clean up these inactive sites. The legislation was deemed necessary to give DOE authority to remediate these particular sites because it had been difficult to fix legal responsibility over the sites.

Historically, neither the AEC nor the NRC had regulatory jurisdiction over uranium mill tailings after mill operations were terminated because the tailings were not themselves licensable material. Regulatory control had been asserted indirectly as part of the Commission's licensing of ongoing milling operations pursuant to licensing authority over source material. However, once operations had ceased at the 22 inactive sites and all licensable quantities of source material were removed, the regulatory staff had no further role.[20]

From the outset, however, the Administration made it clear that there were additional inactive sites under study for possible remediation which were not being addressed by the proposed legislation. As described in the written testimony of Dr. Liverman of the DOE before the House Subcommittee on Energy and Power:

> In addition to the above mentioned studies of the 22 inactive mill tailing sites we are currently in the process of evaluating a number of sites at which a variety of materials from uranium and thorium ores to refined products were handled or processed. Most of these properties were released from Federal control in the period 1943 to 1970. However, once this survey is completed, the need for remedial action determined, and issues of legal responsibility settled, DOE will be in a position to determine which, if any, of these properties could be included in this legislation.[21]

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[18]See Iraola & CIA v. Kimberly-Clark Corp., 2000 U.S. App. LEXIS 27989 at * 6 (11th Cir. Nov. 9, 2000).

[19]Burlington Northern Railroad Co. v. Oklahoma Tax Comm'n, 481 U.S. 454, 461 (1987). See also Iraola & CIA v. Kimberly-Clark Corp., 2000 U.S. App. LEXIS 27989 at * 6 (11th Cir. Nov. 9, 2000); U.S. v. Dauray, 215 F.3d 257 (2d Cir. 2000); Vergos v. Gregg's Enterprises, Inc., 159 F.3d 989 (6th Cir. 1998); Stiltner v. Beretta U.S.A. Corp., 74 F.3d 1473 (4th Cir. 1996).

[20]H.R. REP. NO. 95-1480 (II), at 29-30 (1978).

[21]UMTRCA Hearings I at 185.

Dr. Liverman, in discussing the inactive sites further, noted that "we do not need authorization to deal with a number of those; whereas, in the case of mill tailings, we do not have the authority to move ahead in that area . . . We will be coming back annually in the appropriations process to deal with those sites. If we find that our statutory authority is inappropriate to deal with the question, then we will be back about that issue also." [22]

Throughout the legislative session, as the proposed remedial legislation was refined and even as additional provisions to address mill tailings at active sites were introduced, Dr. Liverman continued to describe these former research and development sites, the FUSRAP sites, as not covered by the legislation. At the July 26, 1978, hearings in the House, Dr.Liverman informed the House Subcommittee on Energy and the Environment that DOE was "not proposing that as a part of this bill because we have not yet accurately determined what the cost may be, but I do want to mention it because it is another thing that is coming across the table, but it is not covered in this legislation."[23] The sites referenced by Liverman were included in the FUSRAP program rather than in Title I of UMTRCA. Liverman reiterated upon questioning that the sites he was discussing were "not part of this legislation. They were deliberately eliminated by the Office of Management and Budget because we needed to do a more detailed study of those sites, and get a clear estimate so we could bring to the Congress a bill that made some sense."[24]

As Congress considered the remediation of the 22 inactive mill tailings sites, members were expressing their concern that any legislation should address the problem of controlling tailings at active mill sites to prevent the need for remediation grants in the future.[25] As of 1978, NRC was regulating tailings at active mills indirectly through its licensing of source material milling operations under the AEA of 1954, largely as a result of the enactment of NEPA. Operating uranium mill licenses were conditioned to require proper disposition and stabilization for environmental issues after operations had ceased. However, tailings were not source material licensable by the NRC. Thus once the underlying source material license terminates, there would no longer be a clear basis for regulating the tailings.

The proposals to strengthen NRC's licensing authority over active mill sites, once added to the legislation, were viewed as complementary to the remedial plan for the inactive sites, part of a whole package. But it continued to be recognized by those testifying on the various pieces of legislation that a category of inactive sites (the FUSRAP sites) was not covered. According to D. Berick of the Environmental Policy Center:

> There are some 30 sites, including Middlesex, N.J., where tailings were used in construction as well as the DOE-owned mill at Monticello, Utah and Manhattan

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[22]UMTRCA Hearings I at 301, 309.

[23]Id. at 42.

[24]Id. at 49.

[25]UMTRCA Hearings I at 325.

> Project uranium wastes which are not covered under the remedial legislation . . .[26]

The House Committee Report on HR 13650, the culmination of the various proposals in the House, and the bill reported to the whole House, described the reasons for the legislation as follows:

> The lack of any control over these inactive sites under the 1954 act and other laws to require clean up of these sites is the principal basis for committee action to authorize this remedial program. This situation does not exist at active mill tailings sites. Those sites, even those with tailings derived from Federal contracts, are subject to NRC regulation as a result of the enactment of NEPA in 1970. The NRC can require these operators, as a condition to the granting of a license, to take steps to stabilize these piles, although the control is not adequate. Indeed, the NRC testified that it has obtained commitments from some licensees to cope with the problem to some degree. This bill will provide additional authority to effectively control tailings at these active and all future sites.[27]

As the final legislation moved through the Senate, statements by the sponsors on the floor continued to recognize that Title II was to strengthen prospectively NRC's authority over currently active and future uranium mill tailings, but not inactive sites. Senator Hart noted:

> This amendment addresses two separate but related issues. The first issue concerns remedial action clean up of abandoned uranium mill tailings. The provision to deal with this problem was drafted by the Energy and Natural Resources Committee. The second issue concerns the regulatory and licensing authority of the Federal Government and the States over currently active and future uranium milling activities. The provision concerning this issue was drafted by the Senate Committee on Environment and Public Works. I would like to take a few minutes to explain the rationale behind the Environment Committee's provision, and its relation to the rest of the amendment we are offering.
>
> Mr. President, under present law, the Nuclear Regulatory Commission has the authority and responsibility to regulate uranium milling and milling operations, and the Commission is currently exercising that authority over 11 active sites. An additional 14 sites are regulated by individual States. Under the authority of the Atomic Energy Act, these States developed approved regulatory programs and assumed regulatory responsibility from the NRC.
>
> Although the NRC licenses active uranium mining and milling activities, existing law does not permit the Commission to regulate the disposal of mill tailings once milling and mining operations cease and the operating license expires. It is this

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[26] Id. at 429.

[27] H.R. REP. NO. 1480 (II) at 30 (1978).

> authority to regulate tailings after milling operations cease, that we propose be given to the NRC.[28]

We are led to conclude that the statutory language finally adopted as the UMTRCA implements this division in approach between inactive and active mill tailing sites: Title I gave DOE the authority to remediate 22 named processing sites, authority which the federal government otherwise lacked. Title II strengthened NRC's authority over currently active sites by giving it authority under the AEA, not just NEPA, to regulate tailings at these sites once milling ceased.

The Findings and Purposes section of the legislation bear this out:

> (b) The purposes of this Act are to provide -
> (1) in cooperation with the interested States, Indian tribes, and the persons who own or control inactive mill tailings sites, a program of assessment and remedial action at such sites, including, where appropriate, the reprocessing of tailings to extract residual uranium and other mineral values where practicable, in order to stabilize and control such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public, and
> (2) a program to regulate mill tailings during uranium or thorium ore processing at active mill operations and after termination of such operations in order to stabilize and control such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public.[29]

Since no additional authority was needed by DOE to address the FUSRAP sites, they were not included among the processing sites enumerated in Section 102 of the Act and thus not included within the scope of UMTRCA.

Title II, addressing the second purpose of the Act, is consistent with this prospective authority of the Commission to adequately condition the licenses of all existing and future uranium milling licenses. New section 83 described the new conditions which are to be part of any license in existence on the date of enactment or of any license issued after the date of enactment.

While new section 84 appears to sweep broadly beyond those current and future licensees described in section 83 to authorize management of any of the newly defined by-product material, the language, properly understood in the context of the complementary programs authorized by Title I and Title II for inactive and active sites respectively, simply authorizes the NRC to implement and enforce the standards to be promulgated by EPA at those sites it licenses as well as at the sites to be remediated by DOE under Title I.[30]

The section-by-section analysis for Section 205 in the House Report on the bill confirms that

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[28]124 Cong. Rec. S18,748 (October 13, 1978).

[29]UMTRCA § 2, Pub. L. No. 95-604, 92 Stat. 3021.

[30]UMTRCA § 104(f)(2), 92 Stat. 3027.

> Section 205 authorizes the Commission to promulgate, implement and enforce regulations governing permanent Federal custody of uranium mill tailings disposal sites and governing the activities of the Department of Energy under Title I of the act.[31]

It would be inconsistent for Congress, while acknowledging as a reason Title I was needed to authorize remediation of inactive sites that the regulatory staff had no further role at the inactive site where milling operations had ceased, to then reinstate a regulatory role over a group of inactive sites knowingly excluded from Title I by language in Title II. If a broad regulatory role at inactive sites were reinstated by section 84 beyond that contemplated over Title I sites by Section 104 and 84b, Title I presumably would have been structured differently to give greater prominence to a reinstated regulatory basis for those remedial actions.

In sum, consistent with Congressional intentions, the two titles of UMTRCA are best understood as companion titles to address two distinct categories of mill tailings. As stated in House Report I:

> This remedial program will affect 26 million of the 140 million tons of tailings now located at various mill sites.The committee, however, is also convinced that it would be a generous and costly mistake to authorize a remedial program for inactive mill sites without also enacting regulatory legislation to control the even more serious problem at active mill sites. This portion of the bill will control about 120 million tons of the tailings at active operations (emphasis added).[32]

This structure of UMTRCA and the legislative history demonstrate that Congress did not intend to provide the NRC with jurisdiction over FUSRAP material. Additionally, the legislation which transferred FUSRAP from DOE to the Corps indicates the Congress did not intend for the NRC to regulate remediation of FUSRAP sites.

As part of the nation's early atomic energy program, the Manhattan Engineering District and the Atomic Energy Commission performed work during the 1940s through the 1960s at a number of sites throughout the United States. The radiological contaminants at these sites involved primarily low levels of uranium, thorium, and radium, with their associated decay products. Congress appropriated funds to DOE, which began FUSRAP in 1974 to study these sites and take appropriate remedial action. DOE managed the program under its AEA authority. The AEA provided that the NRC did not regulate these sites or have any oversight role as to their remediation. On October 13, 1997, Congress passed the Fiscal Year 1998 Energy and Water Development Appropriations Act, which transferred administration of FUSRAP to the Corps and appropriated funds to the Corps for the completion of FUSRAP activities. Pursuant to a provision of the Fiscal Year 1999 Energy and Water Development Appropriations Act, the Corps is executing FUSRAP in accordance with CERCLA. Under CERCLA, the Federal lead agency is exempt from licensing and permitting regulations for work done onsite, but not from the substantive requirements of any applicable or relevant and appropriate regulations.

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[31]H.R. REP. NO. 95-1480(II) at 45.

[32]H.R. REP. NO. 95-1480(I) at 29.

The legislative history of the Fiscal Year 2000 appropriations for the FUSRAP program lends additional support to the conclusion that the NRC does not have jurisdiction to regulate the disposal of FUSRAP material. In the committee report on the FY 2000 appropriations bill, the House Committee states:

> In the Energy and Water Development Appropriations Act for FY 1999, Public Law 105-245, Congress directed that the response actions by the Corps of Engineers under FUSRAP shall be subject to the administrative, procedural, and regulatory provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan. In appropriating funds to the Corps of Engineers for the cleanup of contaminated sites under FUSRAP, the Committee does not intend that licensing of the Corps by the U.S. Nuclear Regulatory Commission shall be required for the implementation by the Corps of the responsibility for the cleanup of contaminated sites under FUSRAP.[33]

This history suggests that Congress considered NRC authority over FUSRAP remediation and disposal, and instead chose to place health and safety regulation of the FUSRAP material under CERCLA and the NCP.

C. Prior Statements and NRC Regulations

I recognize that, in the 20 years since the enactment of UMTRCA, the NRC has sometimes taken ambiguous positions regarding what materials fall under its jurisdiction under UMTRCA. However, over the last few years, the NRC has repeatedly articulated the position that it lacks jurisdiction over disposal of tailings from FUSRAP sites. The NRC has consistently told Envirocare, the Corps, the Utah Department of Environmental Quality, and Congress that UMTRCA does not provide the NRC with the statutory authority to regulate the disposal of tailings not created by activities licensed by the NRC in 1978 or thereafter.[34] I will discuss, briefly, two prior NRC statements and actions that NMA and the Petitioners claim contradict the NRC's current view.

In its comments submitted on the petitions, the NMA quotes from a 1992 request for comments on revised guidance related to the regulation of mill tailings, in which it claims that the NRC states that FUSRAP material is section 11e.(2) byproduct material. In that notice, the NRC indicated that:

> Government contracts were issued for thorium source material used in the Manhattan Engineering District and early Atomic Energy Commission programs.

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[33] H. REPT. NO. 106-253 at 77 (1999).

[34] See letter from Robert Fonner, Special Counsel for Fuel Cycle and Safeguards Regulation, NRC, to Ann Wright, U.S. Army Corps of Engineers, dated March 2, 1998; letter from Shirley Ann Jackson, Chairman, NRC, to Charles Judd, Envirocare, dated March 26, 1999. Additionally, over the past few years, the NRC has testified before Congress and provided written testimony and responses to Congressional inquiries on this subject numerous times.

> Wastes resulting from that processing and disposed of at these [FUSRAP] sites would qualify as 11e.(2) byproduct material.[35]

However, a different excerpt from the same guidance refers to FUSRAP material as non-11e.(2) material. The discussion of the FUSRAP wastes cited above falls under section 4 of the notice entitled "Types of Wastes Being Proposed for Disposal in Tailings Piles." The introductory paragraph states:

> The NRC and the Agreement States continue to receive requests for the direct disposal of non-11e.(2) byproduct material into uranium mill tailings piles. *The following general categories of non-11e.(2) byproduct material* illustrates the requests submitted to NRC and the Agreement States for disposal into uranium mill tailings piles licensed under authority established by title II of UMTRCA: ...[36]

FUSRAP is one of four general categories which follow the introductory paragraph. Elsewhere, the notice indicates that " . . . the term 'non-11e.(2) byproduct material' will be used to refer to radioactive waste that is similar to byproduct material, as defined in the AEA in section 11e.(2) but is not legally considered to be 11e.(2) byproduct material."[37] Tailings from FUSRAP sites meet the definition of non-11e.(2) byproduct material provided by the above guidance, since it is similar to byproduct material, but falls outside of the NRC's jurisdiction under the AEA and UMTRCA. Since the guidance refers to FUSRAP material as both non-11e.(2) material and 11e.(2) material, the guidance does not provide any assistance in determining the appropriate status of FUSRAP material.

The NMA also claims that DOE's apparent view that FUSRAP materials include section 11e.(2) byproduct material is entitled to deference. The NMA bases this argument on the DOE's authority under UMTRCA section 101(7) to determine what materials constitute "residual radioactive materials" subject to regulation under Title I and DOE's role as the permanent custodian of decommissioning section 11e.(2) byproduct material disposal sites. This argument is faulty for three reasons. First, as NMA points out, DOE's determination extends to what constitutes residual radioactive material subject to its own jurisdiction under Title I. Section 11e.(2) material may fall under DOE's Title I authority; this does not, however, automatically mean that all material radiologically similar to section 11e.(2) byproduct material falls within the NRC's Title II authority. Second, the NMA fails to explain why DOE should be given deference over the determination of a sister agency's jurisdiction. The only agency which should be given deference in its determination of whether the NRC has regulatory authority over FUSRAP material is the NRC itself. Finally, although some of the material the Secretary could designate as "residual radioactive material" would likely fall within the definition of byproduct material, that term is not used in defining residual radioactive material. Congress distinguished between the "residual radioactive material" subject to DOE authority under Title I of UMTRCA, and "section

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[35]57 Fed. Reg. 20,525, 20,527 (May 13, 1992).

[36]Id. (emphasis added).

[37]Id. at 20,526.

11e.(2) byproduct material" subject to NRC authority under Title II of UMTRCA, even though some of the residual radioactive material is physically and chemically identical to section 11e.(2) byproduct material.

The Petitioners argue that the NRC is contradicting its own regulations by refusing to require a license for disposal of FUSRAP mill tailings materials. According to the Petitioners, 10 CFR 40.2a provides the NRC with the authority to regulate all mill tailings material, including FUSRAP material. 10 CFR 40.2a states:

> (a) Prior to the completion of the remedial action, the Commission will not require a license pursuant to 10 CFR chapter I for possession of residual radioactive materials as defined in this part that are located at a site where milling operations are no longer active, if the site is covered by the remedial action program of Title I of the Uranium Mill Tailings Radiation Control Act of 1978, as amended. The Commission will exert its regulatory role in remedial actions primarily through concurrence and consultation in the execution of the remedial action pursuant to Title I of the Uranium Mill Tailings Radiation Control Act of 1978, as amended. After remedial actions are completed, the Commission will license the long-term care of sites, where residual radioactive materials are disposed, under the requirements set out in § 40.27.
>
> (b) The Commission will regulate byproduct material as defined in this part that is located at a site where milling operations are no longer active, if such site is not covered by the remedial action program of Title I of the Uranium Mill Tailings Radiation Control Act of 1978. The criteria in Appendix A of this Part will be applied to such sites.[38]

The Petitioners claim that this regulation is inconsistent with the position that the NRC lacks jurisdiction over FUSRAP material, since the regulation does not contain an exemption for FUSRAP material. We disagree and believe that the regulation's scope is appropriate in light of the licensed sites that were covered by Title II of UMTRCA.

While the regulations do not specifically address the issue, the legislative history of UMTRCA makes it clear that the scope of 10 CFR 40.2a is necessary to implement that part of section 83a of the AEA, which applies to licenses in effect, but not issued or renewed, after the effective date of section 83a. This part of the statute and the implementing regulation ensure that sites which continue to hold an NRC license, but which have ceased engaging in milling operations, meet the decommissioning and decontamination standards required by section 83. UMTRCA's legislative history demonstrates that at least one such site, if not more, existed. In his testimony before a Senate subcommittee, Dr. Livermore indicated that, although DOE had studied an inactive site at Edgemont, South Dakota, DOE excluded this site from its list of Title I sites because the site remained under license by the NRC.[39] The status of the Edgemont site

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[38] See 45 Fed. Reg. 65,521 (Oct. 3, 1980); as amended at 55 Fed. Reg. 45,598 (Oct. 30, 1990).

[39] See Uranium Mill Site Restoration Act and Residual Radioactive Materials Act: Hearings on S. 3008, S. 3078, and S. 3253 Before the Subcomm. on Energy Production and Supply of the Senate Comm. of Energy and Natural Resources 95th Cong. at 43 (1978).

was further addressed in section 21 of NRC's appropriations legislation for fiscal years 1982 and 1983. The Conference Report for the legislation explained that "[a]lthough the Edgemont site is an inactive uranium mill site, it was not included in the remedial action program established by [UMTRCA] because TVA [the Tennessee Valley Authority] held a current license from NRC for the mill."[40]

By adopting this regulation, the NRC ensured that all classes of sites which contained tailings would be covered by either the NRC's authority under UMTRCA, or DOE's authority under UMTRCA and FUSRAP (later, the Corps' authority under FUSRAP). First, inactive, Title I sites could be remediated by DOE under its UMTRCA authority. Second, active and future licensees of mill tailings sites could be regulated by the NRC under its UMTRCA Title II powers. Third, FUSRAP sites could be remediated by DOE (and later by the Corps of Engineers). Section 40.2a is intended to address another type of site: the inactive, but still licensed site.

D. Regulation of FUSRAP Mill Tailings at a NRC-licensed Site

Envirocare argues that, under the NRC's interpretation of UMTRCA, the NRC would lack the authority to regulate FUSRAP mill tailings material disposed of at a NRC-licensed site. This argument is misguided. Tailings produced in an activity not licensed by the NRC in 1978 or thereafter may nevertheless be subject to NRC regulatory authority under certain limited conditions. If the tailings are sent to a licensed milling facility where they are processed primarily for the extraction of their source material content, such processing would convert the tailings into material that is under NRC jurisdiction, because it is serving as source material. If the tailings are sent to an NRC licensee for direct disposal without processing, the tailings themselves would not be under NRC jurisdiction at the time of the transfer. The mere transfer of tailings not produced in an activity licensed by the NRC in 1978 or thereafter cannot convert the tailings into section 11e.(2) byproduct material over which the NRC has direct authority. However, if the tailings are sent to a NRC-licensed disposal facility, the NRC would have jurisdiction over the licensee and the licensed disposal activities and site. In such a case, the NRC would have authority to ensure that the licensee complies with all license requirements and that the proposed disposal of material not under NRC jurisdiction will not undermine or adversely affect the safety of the disposal site. Under these circumstances, the NRC is regulating the *site*, not the individual materials disposed of at the site.

NRC licensees seeking to dispose of non-11e.(2) material in a NRC-licensed disposal facility should follow the guidance set forth in "Uranium Mill Facilities, Notice of Two Guidance Documents: Final Revised Guidance on Disposal of Non-Atomic Energy Act of 1954, Section 11e.(2) Byproduct Material in Tailings Impoundments; Final Position and Guidance on the Use

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Additionally, the State of New Mexico submitted testimony to the Senate committee in which it identified four inactive sites which were then under New Mexico Agreement State license, but which were excluded from the list of Title I sites. Id. at 115. While two licensed New Mexico sites were eventually included in the Title I program, it appears that the other licensed, inactive sites were covered under the regulatory program created by Title II.

[40]H. REP. NO. 97-884, at 49 (1982) .

of Uranium Mill Feed Materials Other than Natural Ores."[41] The Commission modified this guidance July 26, 2000, in a Staff Requirements Memorandum (SRM). Under the modified guidance, a NRC-licensee may accept non-11e.(2) material in a mill tailings impoundment if it meets the following criteria: 1) there is adequate protection of the public health and safety and environment; 2) the long-term custodian of the site has indicated its willingness to accept responsibility for maintenance of the site prior to NRC approval of the disposal; and 3) necessary approvals of other affected regulators (e.g., States, EPA) have been obtained.

Finally, Envirocare points to UMTRCA section 101(6) as evidence that Congress did not exclude FUSRAP sites from UMTRCA. Section 101(6) defines the term "processing site," and specifically identifies certain types of sites which are excluded from coverage under Title I of UMTRCA. Envirocare correctly notes that FUSRAP sites are not listed as a specific exclusion. However, Envirocare fails to recognize the logical reason for the FUSRAP sites not appearing as an exclusion in this section: some FUSRAP sites may have qualified for designation by DOE as a Title I site pursuant to UMTRCA section 102(a)(1). Congress left DOE a window of opportunity to designate these sites under Title I, but DOE opted not to include any FUSRAP sites in its Title I remediation activities. The section 101(6) exclusions are limited to Title I of UMTRCA, and have no impact upon the NRC's Title II regulatory authority. As noted above, the NRC lacks authority under Title II to regulate tailings from FUSRAP sites because those sites did not have an active license at the time or after the enactment of UMTRCA. Since the FUSRAP sites fall under neither Title I nor Title II, the NRC has no authority to require the Corps to dispose of tailings from those sites at a NRC-licensed facility.

E. Preemption

Petitioner Envirocare argues that States lack the authority to regulate the disposal of mill tailings because Congress preempted the field of mill tailings when it enacted UMTRCA. An analysis of federal preemption in the field of radioactive materials reveals that the Petitioner's assertion is incorrect.

State law may be preempted by Congress in three ways. First, Congress may explicitly state in legislation that federal authority over a particular subject is exclusive. Second, courts may infer federal preemption from the language of a statute, its legislative history, or the objects of its federal regulatory scheme. Finally, state law will be preempted if it is impossible to comply with both the state law and the federal law.[42]

In drafting UMTRCA, Congress did not explicitly state that the NRC or any other federal agency would have exclusive control over all tailings. Instead, the Commission's new regulatory authority under UMTRCA only extends to tailings produced or possessed by a person licensed by the NRC as of the effective date of UMTRCA or thereafter. Additionally, neither the language of the statute nor the legislative history of UMTRCA suggests that states would lack the authority to regulate tailings not covered by either Title I or Title II of UMTRCA. Finally, any state law regulating the disposal of FUSRAP material would not be inconsistent with federal

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[41]60 Fed. Reg. 49,296 (Sept. 22, 1995).

[42]See Silkwood v. Kerr-McGee Corp., 464 U.S. 238 (1984); Pacific Gas & Elec. Co. v. State Energy Resources Conservation and Dev. Comm'n, 461 U.S. 190 (1983).

law, because the AEA as amended by UMTRCA and the NRC's regulations do not address disposal of FUSRAP material.

The Corps argues in its response that preemption by the NRC in the field of radioactive materials is limited to those materials over which the NRC has regulatory authority. This argument has support in federal case law. In Illinois v. Kerr-McGee Chemical Corp.,[43] the Court of Appeals stated that "the Commission has exclusive authority to regulate radiation hazards associated with the materials and activities *covered by the Atomic Energy Act* . . . ."[44] As noted above, we believe the legislative history makes it clear that the ore processing residuals from FUSRAP sites are not covered by the AEA. Therefore, the NRC does not have exclusive authority to regulate the radiation hazards posed by the disposal of FUSRAP ore processing residuals.

In discussing the NRC's authority to regulate radiation hazards, the Court of Appeals in Kerr-McGee determined that Congress did not "intend to create a situation in which some hazards could go unremedied. Congress' concern was to avoid dual regulation of radiation hazards. We can find no expression of a congressional intent to leave certain hazards beyond the scope of any control whatsoever."[45] Based on this conclusion, the Court held that, if the NRC lacked jurisdiction over the material at the Kerr-McGee site, then the city of West Chicago was not preempted from applying city laws to the site. The same principle applies to FUSRAP sites and materials. Since the NRC lacks jurisdiction over the disposal of FUSRAP mill tailings material that were not licensed in 1978 or thereafter, there is no bar of federal preemption under the AEA with respect to this material and nothing in the AEA prohibits the states from regulating the disposal of FUSRAP mill tailings material.

F. Health and Safety Issues

Tailings that were produced in activities under NRC license at the time of the enactment of the UMTRCA in 1978, or that were licensed thereafter, fall under Title II of UMTRCA. Under Title II, if a license for the activity was issued or in effect in 1978 or thereafter, cleanup of the site is regulated by NRC. Tailings produced in activities not under an NRC license at the time of enactment of UMTRCA, or thereafter, are not regulated by NRC because the agency has concluded that its authority does not extend to such material. For these reasons, the NRC does not require the Corps to dispose of this material at NRC-licensed facilities. The Corps has used hazardous waste facilities permitted under RCRA for the disposal of ore processing residuals from FUSRAP sites. According to the Corps, the use of RCRA Subtitle C facilities in the FUSRAP program for disposal of certain kinds of radioactive wastes fosters competition, avoids capacity limitations, and minimizes schedule delays.

The Petitioners argue that NRC's current interpretation of UMTRCA results in significant and unjustifiable health and safety risks by leaving large quantities of radioactive material unregulated. The NRC is not aware of any significant public health and safety concern with the

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[43]677 F.2d 571 (7th Cir.), cert. denied 459 U.S. 1049 (1982).

[44]677 F.2d at 581 (emphasis added).

[45]Id. at 583.

Corps' disposition of the mill tailings from the FUSRAP sites. We recognize that, for the purposes of radiological protection, mill tailings not licensed on the effective date of UMTRCA have the same radiological characteristics as mill tailings at licensed sites. However, in regulation of radioactive material across the nation at the state and federal level, it is not unusual for similar materials to be regulated differently. This is the result of the sometimes fragmented statutory regime governing radioactive materials. As noted above, we believe that Congress has clearly indicated, through appropriations legislation and the history of that legislation, that the Corps has authority for remediation of FUSRAP sites pursuant to CERCLA in a manner that protects the public health and safety.
There are many types of radioactive wastes that are similar to mill tailings because of their radioactivity levels, and the presence of long-lived radionuclides such as uranium, thorium, and radium. Some of these include naturally-occurring and accelerator-produced radioactive material (NORM and NARM), exempt source material, technologically enhanced naturally occurring radioactive material (TENORM), and low-level waste. These similar materials with comparable hazards may or may not be regulated, and, if regulated, may be regulated by other agencies or the states under programs which require disposal in specific kinds of facilities.

Low-level waste (LLW), NARM, TENORM, and mill tailings are characterized by wide ranges of radioactivity, from background or near background soil levels to levels that are 100 million times more concentrated than soil. TENORM is material whose radioactivity has been enhanced (i.e., increased or concentrated) as a result of human intervention. It includes coal ash from coal-fired power plants, uranium mining overburden, phosphate ore, pipe scale from oil and gas production, and water treatment sludge. In addition, the mineral extraction industry produces large volumes of TENORM with some of the characteristics of uranium mill tailings, including processing chemical residues. The EPA reports that TENORM volumes produced annually in the U.S. may be in excess of one billion tons. By comparison, the annual amount of LLW produced for disposal under the Low-Level Radioactive Waste Policy Amendments Act of 1985 is approximately 60,000 tons, or one ten-thousandth as much as TENORM. If uranium mill tailings were not defined as section 11e.(2) byproduct material by the AEA, they would be considered to be TENORM.

The range in radioactivity found in mill tailings, LLW, exempt source material, and TENORM has significant overlap. These four groups of wastes are also similar in that they contain or may contain (in the case of LLW) the long-lived isotopes of uranium, thorium, and/or radium. Thus, from a risk perspective, LLW, exempt source material, TENORM, and mill tailings are similar in that each contains very long-lived radionuclides, often in the same range of concentrations. However, from a legal perspective, they are regulated differently.

Different laws and programs that apply to these different materials affect how they are regulated, even though they may pose a similar risk. A number of laws apply or may apply to such materials and to other forms of TENORM, including the Clean Air Act, Clean Water Act, Safe Drinking Water Act, CERCLA, and Toxic Substances Control Act. None of these acts provide EPA with explicit authority over TENORM, but EPA is working to establish standards for TENORM under these statutes.

In the absence of more definitive EPA regulations, most States have adopted their own regulations for TENORM. In practice, TENORM waste that is disposed of (as opposed to remaining in place at the site of generation or stored) may be placed in an RCRA Subtitle D

landfill, a Subtitle C hazardous waste facility, or an NRC or Agreement State licensed LLW facility, depending on the State and the hazard of the TENORM.

Because FUSRAP mill tailings material is outside the regulatory authority of the NRC, the Corps has additional options for disposal of this material, instead of just placing it in an NRC-licensed tailings impoundment or disposal facility. As with TENORM, the Corps has allowed some FUSRAP material to be disposed of in RCRA hazardous waste landfills. FUSRAP material also has been disposed of in a NRC-licensed section 11e.(2) disposal facility (Envirocare). The Corps has indicated that none of this material has been disposed of in a Subtitle D landfill.

Mill tailings produced under an NRC license are required to be disposed of in special impoundments which meet detailed requirements. The NRC requirements are based on the EPA standards for mill tailings, which, in turn, are based on the EPA hazardous waste standards applicable to RCRA disposal cells. State-of-the-art mill tailings impoundments, like RCRA hazardous waste disposal cells, rely, in part, on a system of liners and leachate detection and collection systems to prevent releases of hazardous and radioactive materials to the environment, monitoring, inspection, site selection, and other detailed requirements. Because mill tailings impoundments and hazardous waste cells are based in large part on the same EPA requirements, the NRC believes that both RCRA disposal cells and NRC-licensed disposal facilities are fully protective of the public health and safety. It should be noted that NRC mill tailings regulations include requirements not found in EPA's RCRA regulations, such as eventual government ownership of the tailings piles, and designs that provide for long-term (1000 years, to the extent practicable, but in no case less than 200 years) stability. EPA's regulations, however, have requirements for enduring institutional controls which achieve a similar level of protection.

Practices at RCRA facilities vary depending upon the permit conditions for radioactive materials imposed by EPA or the State permitting agency, and the radioactivity of the waste for disposal. The Buttonwillow hazardous waste facility in California, for example, accepts TENORM that is less than 2000 pCi/gram in radioactivity concentration. The 2000 pCi/gm threshold derives apparently in part from Department of Transportation regulations on shipment of radioactive material. Under those regulations, material with concentrations of radioactivity below 2000 pCi/gram is not considered radioactive material for purposes of transportation. The Envirosafe facility in Idaho, which accepts NORM and FUSRAP waste, is subject to permit conditions that specify limits for uranium, thorium, and other isotopes, and impose the same radioactivity concentration limit as specified for the Buttonwillow facility in California.

While the NRC does not have authority over pre-UMTRCA mill tailings from FUSRAP sites, we believe that the RCRA and state permitted facilities that the Corps is using for disposal of this material provide sufficient health and safety protection for both workers and the public.

IV CONCLUSION

For the reasons stated above, the petitions of Envirocare and Snake River Alliance are denied. The NRC will continue to refrain from imposing disposal requirements for the mill tailings generated at FUSRAP sites because this material is outside of the agency's jurisdiction. However, if Congress determines that the disposal of such material warrants NRC oversight, the NRC stands ready to implement new legislative directives in that regard.

A copy of the Decision will be filed with the Secretary of the Commission for the Commission's review in accordance with 10 CFR 2.206(c). As provided for by that regulation, the Decision will constitute the final action of the Commission 25 days after the date of issuance of the Decision unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

William F. Kane, Director
Office of Nuclear Material Safety and Safeguards

Dated at Rockville, Maryland,
this 13th day of December 2000.