

ENVIROCARE OF UTAH, INC.
THE SAFE ALTERNATIVE

October 25, 2000

VIA FACSIMILE - (301) 415-3725

Jack Goldberg
Deputy Assistant General Counsel for Enforcement
Nuclear Regulatory Commission
One White Flint North Building
11555 Rockville Pike
Rockville, MD 20852-2738

Dear Mr. Goldberg:

Representatives of Envirocare of Utah, Inc. (Envirocare) met this morning with Nuclear Regulatory Commission staff including Stuart Treby from the Office of General Counsel. I had a couple of questions about Envirocare's 2.206 petition and Mr. Treby referred me to you.

I am curious as to whether the NRC intends to provide the petitioners an opportunity to review the Commission's decision under the NRC's new 2.206 petition process. We certainly would like to take advantage of this opportunity if it exists.

In addition, I clarified for Mr. Treby that the attached letter and responses relate to issues before the NRC in our 2.206 petition, and we would appreciate a careful consideration by the Commission of these matters.

Please telephone me at (801) 557-4350 if you have any questions. Thank you.

Very truly yours,

Jonathan P. Carter
General Counsel

Attachment

cc: Stuart Treby, Via Facsimile, w/o attachment
Karen Cyr, Via Facsimile, w/o attachment

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OGC 01

MILLER & CHEVALIER

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October 18, 2000

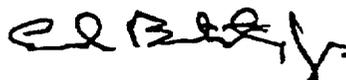
Mr. Dennis K. Rathbun
Director, Office of Congressional Affairs
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Mr. Rathbun:

Envirocare of Utah has reviewed the NRC's responses to questions of the Senate Committee on Environment and Public Works regarding uranium mill tailings regulation that were attached to your letter of September 12, 2000, to Senator Bob Smith. The attached comments on those responses are submitted on behalf of Envirocare. The comments are directed to four of those responses, since, in Envirocare's view, it is those responses that bear most directly on the subject matter of Envirocare's pending section 2.206 petition on mill tailings regulation.

By copy of this letter, we request that the attached comments be considered in connection with that petition.

Yours sincerely,



Leonard Bickwit, Jr.

Attachment

cc: Dr. William D. Travers
NRC, Executive Director for Operations

Stuart A. Treby, Esquire
NRC, Office of General Counsel

Douglas E. Roberts, Vice President, Regulatory and External Affairs
Envirosource Technologies

Robert M. Andersen
Chief Counsel, U.S. Army Corps of Engineers

Gary Richardson, Executive Director
Snake River Alliance, Petitioner

SENATOR BENNETT'S QUESTION 6

Is NRC reversing the position stated in 57 Fed. Reg. 20,527 (May 13, 1992) that materials that satisfy the 11e.(2) definition generated by MED/AEC “qualify as 11e.(2) byproduct material”? And if so, why?

This question and the NRC's response both address a 1992 Request for Public Comment (“the Request”) on proposed Commission guidance regarding disposal of “non 11e.(2) byproduct material” in uranium mill tailings piles. The response suggests that the Request's discussion of section 11e.(2) byproduct material is consistent with the Commission's current position that pre-1978 FUSRAP mill tailings¹ are not covered by section 11e.(2) of Atomic Energy Act (“AEA”).² To the contrary, however, the Request clearly indicates that FUSRAP mill tailings are section 11e.(2) material. The response reaches the opposite conclusion only because it does not focus on critical portions of the Request. Thus, the NRC's current position is in fact a reversal of the position taken in the Request.

The response correctly points out that in the Request, “the term ‘non-11e.(2) byproduct material’” refers to waste that is “similar” to section 11e.(2) material but “is not legally considered to be 11e.(2) byproduct material.” The response also correctly observes that certain FUSRAP wastes are described by the Request as falling into this category of “non-11e.(2) byproduct material.” What the response omits, however, is the reason why these wastes are viewed as not qualifying as 11e.(2) material. That reason is that the particular FUSRAP wastes identified are wastes that are not produced from the processing of source material. It is only those wastes that are referred to in the request as “non-11e.(2) byproduct material,” while FUSRAP wastes that were produced from such processing are clearly viewed by the Request as within the coverage of section 11e.(2).

The Request's General Principle

A review of the Request's relevant language makes this clear. At the beginning of the Request, it is stated:

In the guidance documents and associated staff analyses [included in the Request], the term “non-11e.(2) byproduct material” is used to refer to radioactive waste that is similar in physical and radiological characteristics (for example, low specific activity) to byproduct material, as defined in Section 11e.(2) of the AEA

¹ These comments will use the term “pre-1978” material to refer to material over which the NRC asserts that it lacks jurisdiction.

² Envirocare acknowledges that it does not know the exact position that the Commission is or will be taking on this matter. For purposes of these comments, it will assume that the position is that mill tailings do not meet the definition of section 11e.(2) of the AEA unless such tailings were produced at a site licensed by the NRC as of the effective date of section 83 of that act or thereafter.

but does not meet the definition in that section because it is not derived from ore processed primarily for its source material content.

(Emphasis added.) It is then stated, in a reference to such material, that:

Some licensees have proposed to directly dispose of radioactive wastes in existing uranium mill tailings sites. The materials vary from tailings from extraction processes for metals and rare-earth metals (such as copper, tantalum, columbium, zirconium) to spent resins from water-treatment processes. However, because these materials did not result from the extraction or concentration of uranium or thorium from ore, they are not 11e.(2) byproduct material.

(Emphasis added.) The general principle is thereby established that tailings resulting from the processing of metals and rare-earth metals, as well as other wastes unrelated to AEA source material, are not section 11e.(2) byproduct material and are to be distinguished in that regard from tailings resulting from the processing of uranium and thorium, which are to be considered 11e.(2) material.

Application of the Principle

The Request then applies this general principle to the "Types of Wastes Being Proposed for Disposal Into Tailings Piles." At the beginning of that discussion is the language cited in response to Senator Bennett's question. That language reads as follows:

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 illustrate 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.

The first category, mine wastes, are found not to "satisfy the definition of 11e.(2) byproduct material, because they do not result from the extraction or concentration of uranium or thorium from ore." (Emphasis added.) The second, secondary process wastes, are described as tailings created when "natural ores . . . are processed for rare-earth or other metals." (Emphasis added.) These tailings are not viewed as 11e.(2) byproduct material, since "the ore was not processed primarily for its source material content, but for the rare-earth or other metal."

(Emphasis added.)

It is against this background that the discussion of wastes at FUSRAP sites takes place. The full discussion of those wastes is as follows:

These sites primarily processed material, such as monazite sands, to extract thorium for commercial applications. Government contracts were issued for thorium source material used in the Manhattan Engineering District and early Atomic Energy Commission programs. Wastes resulting from that processing and

disposed of at these sites would qualify as 11e.(2) byproduct material. However, it is not clear that all the contaminated material at these sites result from processing of ore for thorium. At some sites there was also processing for rare earths and other metals. The DOE, which accepts responsibility for the FUSRAP materials, is investigating options for disposal and control of these materials. DOE estimates that a total of 1.7 million cubic yards of material is located at sites in 13 States. Recent proposals have considered the transportation of FUSRAP materials from New Jersey to tailing piles at uranium mills in other States, such as Utah, Washington, and Wyoming.

(Emphasis added.) There can be no doubt as to the point the Request is making by these observations. While the FUSRAP tailings not resulting from the processing of source material are not section 11e.(2) material, tailings that do result from such processing do in fact constitute 11e.(2) material.

The Meaning of "Would"

The response also argues that when the Request states that FUSRAP "would qualify as 11e.(2) byproduct material" (emphasis added), it means only that such tailings would qualify as such material if they "fell under NRC jurisdiction in the first place." This argument is plainly without merit. The response places great weight on the Request's use of the word "would" in the above-quoted language. The phrasing used, however, is merely a natural way to provide a generalized explanation. In fact, in the paragraph just preceding the one in which the quoted language appears, the discussion of "secondary process wastes" contains the same phrasing: "If the tails contain greater than 0.05 percent uranium and thorium, they would be source material and would thus be licensable and have to be disposed of in compliance with NRC regulations." (Emphasis added.) This is not a reference to what would happen if some other unnamed condition were met.

In sum, one would conclude from the response that the Request means just the opposite of what it says. The only defensible answer to Senator Bennett's question is that the Commission's current position is in fact a reversal of the position it took in the Request.

A marked-up copy of the relevant portions of the Request is attached.

Attachment

SENATOR BENNETT'S QUESTION 4

Please explain why 10 C.F.R. 40.2(b) [sic] makes no reference to such materials having to be licensed by NRC but rather appears to suggest that NRC can regulate such materials whether licensed or not as long as they are not at a DOE controlled Title I site.

The response to this question takes a similarly forced approach to 10 C.F.R. § 40.2a. A fair reading of the regulation again demonstrates that the Commission is reversing previously held positions.

The regulation in question reads as follows:

Section 40.2a Coverage of inactive tailings sites.

(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.

The structure of this regulation and the dividing line it draws are stated clearly. The title indicates that the regulation as a whole deals with "inactive tailings sites." The category of inactive sites is divided into two components. Subsection (a) addresses "site[s] where milling operations are no longer active, if the site is covered by the remedial action program of Title I of the UMTRCA." (Emphasis added.) Subsection (b) covers the rest, that is, "site[s] where milling operations are no longer active, if such site is not covered by the remedial action program of Title I of the UMTRCA." (Emphasis added.) There is no suggestion that anything less than all inactive sites are intended to be covered by the section's provisions. In this respect, the regulation reflects the broad statutory language of sections 11e.(2), 81 and 84 of the AEA. From the title of the regulation on down, the clear indication is that the section deals with the entirety of the category of inactive sites.

The Text of the Rule

The response, accordingly, is at odds with the rule's text. It reads an additional restriction into subsection (b), claiming that the subsection applies only to an inactive site that was under active license "as of the effective date of UMTRCA." The response appears to acknowledge the tension between the NRC's current position on section 11e.(2) and the language of the regulation. It argues, however, that "[t]he inconsistency disappears if the intent of the regulation is understood." This leads to some necessary questions. If an essential feature of subsection (b) is that only licensed sites are covered by the subsection, why does the subsection make absolutely no reference to that limitation? Why is there no indication of the Commission's current interpretation either in section 40.2a or in any other section of UMTRCA's implementing regulations? Given that exemptions from licensing and regulation are clearly stated all throughout those regulations and elsewhere in Part 40,¹ why is there no mention of an exemption from regulation for tailings from sites not under license as of November 8, 1981 (i.e., the effective date of Section 83)? How could the Commission consistently fail to include references to an exemption that goes to the heart of the Commission's jurisdiction over mill tailings? The analysis of the Commission's regulations put forward in this response parallels the analysis that has been offered with respect to the legislation itself. In each case, it is asserted that language that on its face unquestionably covers all mill tailings at inactive sites should be read not to do so. In the absence of some compelling explanation as to why this purported exemption was left unexpressed, it is not possible to believe that any such exemption was actually intended.

Other Contemporaneous Commission Actions

Not only are indications of the Commission's current interpretation absent from the proposed and final versions of this regulation; they are also missing from other relevant contemporaneous Commission documents. No mention of the Commission's current interpretation can be found, for instance, in the Commission's final rule of August 24, 1979, relating to mill tailings licensing;² in Commission meeting transcripts in 1979 regarding the need for such licensing and for proposed changes in UMTRCA;³ or in the Executive Legal Director's discussion papers on which the Commission meetings were held.⁴ If the Commission in 1979 and 1980 had in fact adopted the interpretation now held by the NRC, there would have been good reason for it to note that interpretation at that time. The meeting transcripts indicate that

¹ See, e.g., 10 C.F.R. §§ 40.1, 40.2, 40.11, 40.12, 40.13, 40.14, 40.32 and 150.31.

² 44 Fed. Reg. 50,012 (Aug. 24, 1979).

³ Discussion of SECY-79-88 – Timing of Certain Requirements of the Uranium Mill Tailings Radiation Control Act of 1978 before the Nuclear Regulatory Commission (March 7, 1979); Discussion of SECY-79-88 – Uranium Mill Tailings before the Nuclear Regulatory Commission (May 9, 1979 and May 17, 1979).

⁴ SECY-79-88 (Feb. 2, 1979); Staff Response to the Commission Request for Further Information Regarding SECY-79-88 (May 7, 1979).

the Commission was eager to avoid licensing tailings in the immediate aftermath of UMTRCA's enactment at sites licensed by Agreement States.⁵ It undertook such licensing only because the Executive Legal Director advised that UMTRCA required such action.⁶ Had the Commission actually believed that its licensing responsibilities related only to tailings produced at sites licensed on the effective date of section 83, it could have argued that those responsibilities could not be determined until that effective date had arrived and should accordingly be delayed. Its failure to make that argument is further evidence that the Commission's current position is one that was not held by the Commission at the time.

As a related matter, it should be noted that if the Commission had actually held that position, it could not have justified the licenses it issued in 1979 and 1980. In those years, the Commission issued general licenses to its licensees for the tailings possessed by those licensees. One may legitimately ask under what authority it was functioning. Under the Commission's current position, the NRC at that time could not have known what tailings constituted "byproduct material," since that fact would have been unknowable until November 8, 1981, the effective date of section 83 and the date on which jurisdiction would have been determined. The Commission would essentially have been in limbo prior to that date, since although it had been told to regulate "any byproduct material" immediately upon enactment,⁷ it would not have known which tailings were "byproduct material" until three years after enactment. The Commission issued tailings licenses during this period because such an anomalous construction almost certainly never occurred to anyone at the Commission at the time. The total confusion this construction would have caused during these early years strongly suggests that the construction never occurred to anyone in the Congress either.

NRC Actions Since 1998

Envirocare's comments on the NRC's responses to Senator Bennett's Questions 4 and 6 thus support the view that prior to 1998 the Commission interpreted its authority to apply to all mill tailings without exception. The responses themselves, on the other hand, attempt to convey the impression that the position taken in the so-called "Fonner letter" of March 1998 was consistently maintained during the twenty years prior to that letter. For the reasons stated, the responses are not persuasive in that regard.

⁵ The Commission wished to delay its licensing authority until three years after enactment, as it had proposed in the legislation it originally submitted to the Congress. See H.R. 13382, 95th Cong. § 2 (1978). This bill, introduced by Congressman Udall, was based on the Commission's submission.

⁶ It is significant that the Executive Legal Director's advice that licenses were required to be issued immediately was based entirely on sections 81, 84 and 11e.(2) of the AEA. There is no indication in that advice that section 83, which had not yet become effective at the time, in any way limited the reach of those sections with respect to the Commission's obligations under UMTRCA or that section 11e.(2) was otherwise limited in its coverage.

⁷ See UMTRCA § 208.

It is worth noting, moreover, that even since 1998 the Commission has taken positions at odds with its current view. First, the Commission has maintained that it can regulate pre-1978 mill tailings on NRC-licensed 11e.(2) sites to the same extent as it regulates post-1978 tailings. In a letter to the Utah Department of Environmental Quality, it stated, “[i]f pre-1978 11e.(2) byproduct material is presented as such to the NRC-licensed Envirocare facility for disposal, Envirocare must comply with all the requirements applicable to disposal of 11e.(2) byproduct material.”⁸ This statement cannot be reconciled with the Commission’s position that pre-1978 material is beyond the Commission’s jurisdiction. The Commission cannot regulate non-licensable material to the same extent that it regulates licensable material, even when the non-licensable material is sent to an NRC-licensed site.

Second, the NRC initially indicated that an Envirocare request to dispose of pre-1978 mill tailings in its Utah Agreement State-regulated low-level waste cell should be denied based on 10 CFR § 61.1(b) of the Commission’s regulations, which the NRC has asserted restricts the disposal of mill tailings in facilities regulated under Part 61.⁹ It took this position notwithstanding that the restrictions in section 61.1(b) apply only to mill tailings defined in Part 40, which the Commission contends do not include pre-1978 mill tailings.

Third, notwithstanding that under Envirocare’s section 11e.(2) license, non-11e.(2) material may not be disposed of in its licensed 11e.(2) cell, the Commission has routinely permitted the disposal in that cell of FUSRAP mill tailings, which it contends are non-11e.(2) material.¹⁰ Finally, the Commission has consistently permitted such disposal in the face of its current guidance document on the disposal of non-11e.(2) material, which states, “[R]adioactive material not regulated under the AEA shall not be authorized for disposal in an 11e.(2) byproduct material impoundment.”¹¹

⁸ Letter to William J. Sinclair, Director of Utah Dep’t of Environmental Quality, Div. of Radiation Control (Sept. 24, 1999).

⁹ Id.

¹⁰ The disposal of these materials has occurred pursuant to certification procedures specifically required and approved by the NRC to be included in Envirocare’s Standard Operating Procedures. At the time of the adoption of these procedures in April 1994, the NRC stated, “NRC staff has reviewed the information in the procedure and concludes that the procedure will ensure that wastes other than 11e.(2) byproduct material are precluded from disposal in the NRC licensed disposal site. The procedure also will ensure documentation of the constituents in the waste.” See Safety Evaluation of the “Procedures for Certification of 11e.(2) Material.”

¹¹ 60 Fed. Reg. 49,296 (Sept. 22, 1995). Since 1994, Envirocare has disposed of approximately one-half million cubic yards of FUSRAP material in its 11e.(2) disposal cell without NRC objection.

What the Commission has been doing, it appears, is regulating this material when it chooses to and not regulating it when chooses not to, without regard to the clear requirements of the law governing this subject matter and the applicable Commission regulations. The Commission should reject this practice and revert to the position it consistently maintained during the twenty years following UMTRCA's enactment.

SENATOR BENNETT'S QUESTION 3

Exactly where in § 83 or in the related legislative history does it say that NRC has no authority over wastes that satisfy the definition of 11e.(2) byproduct material MED or AEC generated by processing for uranium or thorium if generated prior to 1978? (Please assume that such materials are under the control of a private entity and not DOE or are going to be removed from DOE control).

The Commission's response is reducible to several arguments, which are considered here in order.

The Language of Section 83

The Commission argues that the language of section 83 "clearly indicates that NRC's regulatory authority and responsibility for . . . [mill tailings] material are prospective. That is, Congress intended NRC to regulate only those mill tailings at existing licensees' sites and those newly licensed after UMTRCA was enacted." But the language does not so indicate. What it does indicate is that the provisions of that section are to apply only to licenses in effect on the effective date of the section and all future licenses. The language does not address what other sections of UMTRCA are intended to do.

Moreover, in restricting its application to licenses in effect on the effective date of the section and all future licenses, the section does no more than state the obvious. The only category of licenses excluded are licenses not in effect on the section's effective date, i.e., licenses that existed at one time but that terminated prior to November 8, 1981. That is because it would not have made sense for a section requiring that licenses contain certain specified provisions to be applied to licenses that had terminated before the section even came into effect. There is thus nothing meaningful about the selection of the words "[a]ny license issued or renewed after the effective date of this section." The fact is that no other words could reasonably fit in the place in which those words appear.

What is meaningful is that Congress decided to regulate mill tailings primarily through the licenses of the Commission's source material licensees. Congress made section 83 the centerpiece of Title II, and no doubt anticipated that most of that title's requirements would be imposed through the provisions of that section. It also made unmistakably clear, however, that other authorities and obligations would be assigned to the Commission through other sections of Title II. Sections 81 and 84, in conjunction with the definition of section 11e.(2), extend the reach of Title II beyond the licenses referenced in section 83 to all uranium and thorium mill tailings.

There is nothing ambiguous about these statutory instructions. Section 83's requirements clearly apply only to source material licenses in effect on or after November 8, 1981. The requirements of sections 81 and 84 just as clearly apply to all material meeting the definition of section 11e.(2), i.e., all uranium and thorium mill tailings. Moreover, none of the sections in any way conflicts with the others. The requirements for section 83 licenses are more extensive and specific than the requirements of sections 81 and 84, but the requirements are not in conflict.

What sections 81 and 84 unambiguously indicate is that Congress intended for the NRC's authority to encompass all mill tailings, whenever and however produced. Thus, while the regulation of tailings was to be conducted primarily through the licenses of source material licensees, the Commission was to have authority to deal with any and all safety concerns posed by mill tailings. No other reason has been offered, and none suggests itself, as to why these sections read the way they do.

It thus cannot be said that the language of section 83 "clearly indicates . . . that the Congress intended NRC to regulate only those mill tailings materials at existing licensees' sites and those newly licensed after UMTRCA was enacted." On the contrary, sections 83, 81, 84 and 11e.(2), when read in conjunction with each other, unambiguously indicate just the opposite.

Legislative History: Exemption of FUSRAP

The response also states: "It is clear from the legislative history that Congress was aware of the FUSRAP sites and concluded that those sites would not be handled under UMTRCA." It then cites in support of that contention certain portions of the legislative history, which are discussed below. The first and most obvious answer to the contention, however, is that if it were in fact the case, *i.e.*, if Congress "concluded that [FUSRAP] sites would not be handled under UMTRCA," why did Congress not simply say so in the statute? As just noted, the language of Title II is unambiguously comprehensive. The sequence of events in the legislative history confirms that this comprehensiveness was intentional. NRC draft legislation, which combined the ultimately-adopted definition of section 11e.(2) with the then-existing all-inclusive language of section 81, plainly applied the new licensing authority of the Act to all mill tailings. All versions of Title II considered throughout the legislative process were similarly comprehensive. These versions no doubt were reviewed routinely by NRC lawyers, by counsel for the House committees where the legislation was developed, and by the House Legislative Counsel's Office. The absence of any grandfathering provision in sections 81, 84 or 11e.(2) could not have failed to be noticed. It is apparent that both the Congress and the Commission wished the Commission's authority over tailings to be as comprehensive as its authority over any other licensable material under the AEA. In sum, it is not credible that a Congress that truly wished to exclude material associated with FUSRAP from NRC regulation under UMTRCA would have drafted, in a carefully worded statute where other exclusions are clearly stated, language in Title II that unambiguously covers all mill tailings.

Beyond that, the legislative history strongly indicates that such tailings were intended to be included not only under Title II's provisions, but also under Title I. While the record is often murky and confusing on this matter, it shows that (i) the Congress was indeed aware of some sites that ultimately became "FUSRAP sites," even though they were never referred to by that name and were typically referred to as "other sites"; (ii) at the time UMTRCA was considered, all that was in progress was a survey of these other sites — none had actually been selected for remediation;¹ (iii) the text of Title I, which listed the 22 specific sites that were initially selected

¹ See Uranium Mill Tailings Control Act of 1978: Hearings Before the Interstate and Foreign Commerce H. Rep., 95th Cong. 185 (1978) (statement by James Liverman that DOE was

for the Title I remedial program, also provided for a one-year time frame, or "window," during which DOE was permitted to add to that list of sites; (iv) the principal reason for that window was to allow the survey of the "other sites" to be completed so that those sites could be included in Title I if they were found to have mill tailings and otherwise met the title's criteria; and (v) Congress likely believed that if the surveyed sites had mill tailings on them, and did not qualify for Title I's government-owned site exemption, they would in fact be included in Title I.

It is thus not the case that Congress decided, as the NRC response suggests, to approve a two-track system, with Title I operating on one track and FUSRAP on the other. In fact, it is impossible to imagine that Congress could have sanctioned such a system, given the other contemporaneous decisions it was making regarding UMTRCA. In its development of Title I, Congress insisted on significant and unusual regulatory controls, the most important of which were federal or state acquisition of tailings sites and disposal sites, the ultimate transfer to the federal government of the tailings and sites once remedial action was complete, and NRC licensing of DOE or such other federal agency as the President determined should be the ultimate custodian of the land and the tailings. Notwithstanding that the NRC objected to the licensing of DOE, the Congress insisted that such licensing be required. Against this background, it is not conceivable that Congress, to the extent it understood that the "other sites" might have mill tailings on them, would have accepted a separate remediation system for those sites free of the protections Congress had laboriously developed for the Title I program, especially NRC regulation.²

Mr. Liverman's Statement

The response bases its arguments to the contrary on three portions of the legislative history: (i) a statement of James Liverman, DOE Acting Assistant Secretary for the Environment, (ii) language in a House committee report with respect to certain reporting requirements under the statute, and (iii) certain statements that the response asserts indicate that Title II was to apply only to existing and future licensed sites. None of this legislative history provides a basis for the NRC's current position.

To begin with, the response's quote from Mr. Liverman can by no means be viewed as the Congress's final word on whether the sites DOE was still surveying would be covered by

"currently in the process of evaluating" these sites for radioactivity hazards, that some of these sites would "probably" require remediation, but that "the need for remedial action [had not yet been] determined") ("Commerce Hearings").

² Of course, notwithstanding these intentions at the time of enactment, the FUSRAP sites ultimately were never incorporated into the program. They were, however, covered by Title II nonetheless, since that title was drafted comprehensively. As stated in its pending section 2.206 petition, Envirocare is not arguing that the reason Title II was so drafted was to cover such sites. That may or may not have been the case. What is clear is that the title was drafted comprehensively to cover all eventualities, i.e., to cover everything that the Congress thought of, or might not have thought of, with regard to mill tailings.

Title I. For one thing, Mr. Liverman appears to have been of more than one mind on the matter. In another passage, he indicated that after the current survey was complete, "DOE will be in a position to determine which, if any, of these properties could be included in this legislation."³ Far more important, from all indications Congress disagreed with the statement quoted in the response. As indicated, what Congress enacted in Title I was a provision that designated a one-year window for the post-enactment designation of sites other than the sites listed in the title. In discussing an early draft of this "window" provision, the EPA explained that "DOE has been conducting environmental surveys of old sites that were formerly used for research and development work in the early days of the Nation's atomic energy program. Some of these sites may be found to have similar conditions and would be covered under this bill." (Emphasis added.) In fact, before UMTRCA's enactment, the ongoing survey had already identified one site that involved a serious mill tailings problem — Canonsburg, PA — and this site was immediately added to Title I.⁴ As for other sites in the survey, Congress specifically asked whether any of these sites were known to have mill tailings, and DOE indicated in response that it could not yet identify any such sites with mill tailings.⁵

In short, Congress from all indications believed it had successfully provided for the remediation of all inactive mill tailings sites not covered by a specific exemption. After listening to Mr. Liverman, the EPA and the other relevant hearing witnesses, the House Interior Committee explained that the 22 named Title I sites "consist of tailings resulting from operations under Federal contracts. None are now under active license by the Nuclear Regulatory Commission. While it is believed that these sites are the only ones which possess all such characteristics, the bill permits the inclusion [through the window provided] of any other sites meeting those characteristics."⁶

Report Language On Reporting Requirements

The response relies on House Commerce Committee report language that requires reports with regard to remedial activities concerning certain sites that were ultimately included in FUSRAP. The response notes that the sites are identified separately from Title I sites and concludes that Congress "viewed the FUSRAP sites as separate and distinct from the Title I sites."

³ Commerce Hearings at 185.

⁴ See UMTRCA § 102(a)(1); Uranium Mill Tailings Control Act of 1978: Hearings Before the Subcomm. on Energy and the Environment of the Comm. on Interior and Insular Affairs, 95th Cong. 49 (1978) ("Interior Hearings"); Commerce Hearings at 298.

⁵ See, e.g., Commerce Hearings at 328-32 (giving a list of "all known mill tailings sites located in the United States" that did not include any sites in the survey except for Canonsburg).

⁶ H. R. Rep. No. 95-1480, part 2, at 13 (1978) ("Interior Committee Report").

The reporting requirement in question, however, relates to a category of sites specifically exempted from Title I: government-owned or controlled sites.⁷ There is no doubt that such sites were excluded from Title I coverage under section 101(6)(A)(i) of UMTRCA. Thus, while it is true that some sites that later became FUSRAP sites are mentioned in the report language, that is only because they qualified for this specific exemption for federally owned sites. The language makes this clear:

The Committee understands there that [sic] are a number of federally owned or controlled sites with such materials or tailings, such as the TVA site mentioned earlier and a DOE site in Lewiston, N.Y., and some in New Jersey.⁸

(Emphasis added.) As the Commission is aware, FUSRAP deals primarily with privately owned sites. This passage thus in no way implies an exemption from UMTRCA's Title I, much less from Title II, for such sites or for FUSRAP generally.

Moreover, the response's claim that each of the sites mentioned in this passage "was a FUSRAP site at the time Congress enacted UMTRCA" is not correct. First of all, there were no "FUSRAP sites" at the time of enactment. As indicated, no sites had yet been selected for remediation at that time.⁹ Moreover, "the TVA site" is "the Tennessee Valley Authority site at Edgemont, South Dakota," which has never been in the FUSRAP program and which was referred to repeatedly in hearings as an example of an excluded federal site.¹⁰

References to Existing Sites

The response also notes references in the legislative history that it claims suggest that the new authority conferred by Title II was to apply only to milling operations that were active at the time of UMTRCA's enactment. For three reasons, however, those references cannot be relied on to justify the Commission's restrictive interpretation of Title II. First, to the extent that the references can be read as the Commission characterizes them, the references are undeniably imprecise. For example, Title II unquestionably provided the NRC with authority to perform its Title I responsibilities, notwithstanding that those responsibilities do not relate to active mill operations.¹¹ The Commission also has specifically acknowledged that it was provided

⁷ This is one of the two principal exemptions from Title I, the other relating to licensed sites. It is significant that there is no independent exemption for FUSRAP sites that do not fall into these two categories.

⁸ H. R. Rep. No. 95-1480, part 1, at 41 (1978) ("Commerce Report").

⁹ See supra note 1.

¹⁰ Commerce Hearings at 260; see also, e.g., id. at 197, 328.

¹¹ Both the House Interior Committee report and the House Commerce Committee report on the legislation specify that the new section 84 of the AEA was to be used in part for the

authority under Title II to regulate the Edgemont site, an inactive but licensed site. Just as the legislative history references quoted in the response should not be read to preclude the exercise of these authorities, they should not be read to foreclose the regulation of FUSRAP waste. Rather, they should be read to indicate that Title II is primarily, not exclusively, about active mill operations.

Second, the references can be further explained by the fact, discussed earlier, that the Congress in 1978 assumed that the sites that ultimately were remediated under FUSRAP, if they were found to have mill tailings, were to be included in Title I as a result of the one-year window provision provided by that title. Consistent with that assumption, the Congress probably viewed the universe of mill tailings sites as essentially consisting of Title I sites and active mill operations. It is not surprising, therefore, that casual statements of the sort cited by the Commission appear in the record.

Third, the flavor of those statements does not suggest an intent to restrict the Commission's authority. For example, the full paragraph from the House Commerce Committee report from which one of the references cited in the Commission's response was taken reads 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.

(Emphasis indicates the statement that was quoted in the NRC's response.) There is no indication here of an intent to limit the Commission, or to insist that the "additional authority" should never be used at sites that are not active. Such statements should be contrasted with the clear statutory mandates of sections 81, 84 and 11e.(2), which unambiguously provide that the Commission is not to be limited in its jurisdiction over mill tailings, as well as with the substantial legislative history indicating that UMTRCA's coverage was to be comprehensive.¹²

performance of these Title I responsibilities. Interior Committee Report at 21; Commerce Report at 45.

¹² See e.g. Commerce Report at 29, ("The committee is convinced that all tailings pose a potential and significant radiation health hazard to the public."); Interior Committee Report at 15, ("The Commission . . . is the lead agency in regulation, oversight and management of uranium mill tailings-related activities. It is one of the major purposes of [UMTRCA] to clarify and reinforce these Commission responsibilities, with respect to uranium mill tailings at both

Conclusion

In sum, neither the statutory language of section 83 nor UMTRCA's legislative history is in conflict with the view that the NRC's authority under UMTRCA relates to all mill tailings. Some further observations in support of this view are relevant here. The first is that Envirocare is not aware of any statutes that are drafted in the way the NRC now reads UMTRCA. It seems fair to ask whether any other statute exists where the controlling definition is drafted in unambiguously broad terms and where the reader is asked to import major limitations on that definition from other sections of the act that do not purport to modify the definition. It may further be asked whether the UMTRCA Congress, notwithstanding the statute's comprehensive objectives, would have denied the Commission authority (i) over all mill tailings on sites whose licenses terminated between 1978 and 1981, (ii) over all pre-1978 mill tailings on sites rejected by FUSRAP, (iii) over all imported mill tailings, and (iv) over all pre-1978 tailings on government sites, whether or not such sites were acquired by private parties prior to remediation. One must further ask whether the Congress would have endorsed legislation that would have left the NRC in regulatory limbo for three years in the manner referred to in the comment on the previous response. Finally one must ask whether the Congress, in a statute designed to curtail dual regulation, EPA regulation, and state regulation of mill tailings would have endorsed a statute where these objectives were essentially thwarted.¹³ The Commission's interpretation requires one to accept that all of these unlikely and unfortunate circumstances came together in UMTRCA, notwithstanding that the actual language of the statute and the predominant themes of its legislative history clearly indicate just the opposite. Any such interpretation should be firmly rejected.

active and inactive sites.") (Emphasis added.) For a more extensive discussion of the legislative history relating to UMTRCA's comprehensiveness, see Envirocare's Reply to the Supplemental Response of Envirosafe Services of Idaho, Inc. and the Environmental Technology Council and to the U.S. Army Corps of Engineers Letter Response at 23-38 (filed Sept. 13, 2000 with NRC) ("Reply Brief").

¹³ See discussion in Reply Brief at 45-49 and comments on subsequent response.

SENATOR BAUCUS'S AND SENATOR GRAHAM'S QUESTION 2

You have taken the position that the NRC does not have authority over the disposal of FUSRAP mill tailings. Does that mean that you cannot regulate the disposal of such material even at a site that is otherwise regulated by the NRC? Please explain your reasoning on this matter.

The response to this question raises important safety concerns. Under the NRC's current position, the Commission's authority over FUSRAP mill tailings disposed of at NRC-licensed sites is necessarily subject to significant limitations. That is because if pre-1978 FUSRAP tailings are not licensable material, they cannot be regulated as such, whether or not they are sent to an NRC-licensed site. If we understand the response correctly, it is consistent with this view. The response observes that in the circumstances identified the NRC could impose its Part 20 dose limits against the licensee. It does not claim, however, that all other regulations that are significant for safety purposes could be imposed with respect to the FUSRAP material.

In Envirocare's view, the imposition and enforcement of a number of such regulations would be beyond the NRC's authority. For example, if pre-1978 material is brought on-site and, as is often the case, occupies a portion of the site separate from the site's post-1978 material, the radon flux standard of Criterion 6 of Part 40's Appendix A could not be imposed by NRC with respect to the pre-1978 material. The same can be said of other standards of safety significance, such as the ground water protection requirements of Appendix A's Table 5, the ALARA requirements of 10 CFR § 20.1101(b), the storage and control requirements of 10 CFR §§ 20.1801 and 20.1802, the posting requirements of 10 CFR § 20.1902(a), and the long-term surveillance plan requirements of the general license issued under 10 CFR § 40.28. While these are all requirements that the NRC has determined are necessary for the protection of public health and safety where post-1978 material is concerned, the pre-1978 material would be free of such requirements. This would be the case notwithstanding that the pre-1978 material in question would be likely to have radiation levels that are on the higher end of the spectrum for such material. As the Commission is aware, the policy of the Army Corps of Engineers has been to send material with higher than normal radiation levels to NRC-licensed sites.¹

This does not mean, of course, that the material would not be subject to any alternative regulatory regime. From all indications, however, no federal regulation would be available. The Environmental Protection Agency has made clear that it does not regulate pre-1978 mill tailings, since, whatever the NRC's position may be, the EPA views this material as Atomic Energy Act byproduct material.² The NRC's position, accordingly, will leave the regulation of this material to state authorities, without regard to the level of competence and experience such authorities

¹ Needless to say, none of these same safety standards would apply at sites that are wholly unlicensed by the NRC, such as the RCRA disposal sites to which the Corps is now sending FUSRAP tailings with lower levels of radiation.

² Attachment to letter from EPA to Hon. Clint Stennett, Minority Leader, Idaho State Senate, at 3 (June 26, 2000).

may have demonstrated with respect to the regulation of nuclear materials. Some of these states may have no Agreement State relationship of any sort with the NRC.³

The NRC's position also will result in a related undesirable consequence: that of dual regulation of disposal sites. In the scenario discussed — where pre-1978 and post-1978 material exist on the same site in separate identifiable locations — the site owner typically will be subjected to two different sets of regulations and requirements. The Commission has recently considered dual regulation scenarios of this sort in other decision-making contexts and has generally regarded them as undesirable.⁴ Moreover, it is clear that it was a principal objective of UMTRCA to avoid both dual regulation and state regulation of mill tailings.⁵ That the NRC's position will produce just the sort of regulation that the statute was designed to avoid is one of the many anomalous consequences associated with the Commission's position.

An additional safety concern also warrants the Commission's attention. That concern relates to sites that were rejected by DOE for FUSRAP because of "hold harmless" clauses in the contracts under which the relevant waste was produced. These clauses, which arguably freed DOE from responsibility for the clean-up of such waste, have led to the denial of a significant number of FUSRAP applications. It is not clear that the sites involved will ever be remediated. A series of articles in USA Today recently discussed these developments.⁶ While we are not in a position to evaluate the dimensions or severity of the risks involved, what is clear is that these sites will not be regulated by the NRC under its current position. That prospect provides an additional safety-related reason for reexamining the NRC's interpretation.

³ The Corps, of course, could evaluate a state's radiation protection program and its competence to administer that program before sending this material to any given NRC-licensed site. There is serious question, however, whether the Corps institutionally is the appropriate agency to make these judgments. There can be no doubt that the Congress that enacted UMTRCA would not have thought so.

⁴ See Commission vote sheets for SECY-99-0277 and SECY-99-0012.

⁵ See Reply Brief at 48-49.

⁶ Peter Eisler, Little Time For Safety As Arms Race Runs At Full Speed, USA Today, Sept. 6, 2000, at 16A; Peter Eisler, Official Sites Got Attention; Private Sites Stayed Private, USA Today, Sept. 6, 2000, at 16A.

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NUCLEAR REGULATORY COMMISSION
AGENCY: Nuclear Regulatory Commission.

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May 13, 1992

Uranium Mill Facilities, Request for Public Comments on Revised Guidance on Disposal of Non-Atomic Energy Act of 1954, Section 11e.(2) Byproduct Material in Tailings Impoundments and Position and Guidance on the Use of Uranium Mill Feed Materials Other Than Natural Ores
ACTION: Request for public comment.

SUMMARY: The Nuclear Regulatory Commission (NRC) is soliciting public comment on two guidance documents: "Revised Guidance on Disposal of Non-Atomic Energy Act of 1954, section 11e.(2) Byproduct Material in Tailings Impoundments" and "Position and Guidance on the Use of Uranium Mill Feed Materials Other Than Natural Ores;" along with the associated staff analyses.

DATES: The comment period expires June 12, 1992.

ADDRESSES: Send written comments to Chief, Rules and Directives Review Branch, U.S. Nuclear Regulatory Commission, Washington, DC 20555, or hand deliver to 7920 Norfolk Avenue, Bethesda, MD, between 7:45 a.m. and 4:15 p.m. on Federal workdays.

FOR FURTHER INFORMATION CONTACT: Myron Fliegel, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555; telephone (301) 504-2555.

TEXT: SUPPLEMENTARY INFORMATION:

Discussion

NRC staff has prepared a revision to its licensing guidance, issued July 27, 1988, on the disposal of material other than that defined in section 11e.(2) of the Atomic Energy Act of 1954 (AEA), as amended, in uranium mill tailings impoundments (Part A of the Supplementary Information). The staff has also prepared new licensing guidance on the processing of feed materials other than natural ores in uranium mills (Part B of the Supplementary Information). In developing the guidance, staff analyzed the policy and legal issues involved for each guidance document. In order to solicit input all interested parties on the issues associated with these guidance documents, the NRC is soliciting comments from the public, the Environmental Protection Agency, NRC Agreement States, and regional low-level waste compacts. Comments received will be considered in deciding whether the guidance documents should be revised.

In the guidance documents and associated staff analyses, the term "non-11e.(2) byproduct material" is used to refer to radioactive waste that is similar in physical and radiological characteristics (for example, low specific activity) to byproduct material, as defined in Section 11e.(2) of the AEA but

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does not meet the definition in that section because it is not derived from ore processed primarily for its source material content.

The staff analyses in Parts A and B contain additional definitions and extensive background information necessary to understand the summary guidance documents. The reader should consult the analyses for the terms and issues presented in context.

Part A -- Revised Guidance on Disposal of Non-Atomic Energy Act of 1954, Section 11e.(2) Byproduct Material in Tailings Impoundments

1. In reviewing licensee requests for the disposal of source material wastes that have radiological characteristics comparable to those of Atomic Energy Act (AEA) of 1954, section 11e.(2) byproduct material (hereafter designated as "11e.(2) byproduct material") in tailings impoundments, staff will follow the guidance set forth below. Licensing of the receipt and disposal of such non-AEA, section 11e.(2) byproduct material (hereafter designated as "non-11e.(2) byproduct material") should be done under 10 CFR Part 40.

2. Naturally occurring and accelerator produced material waste shall not be authorized for disposal in an 11e.(2) byproduct material impoundment.

3. Special nuclear material and Section 11e.(1) product material waste should not be considered as candidates for disposal in a tailings impoundment, without compelling reasons to the contrary. If staff believes that such material should be disposed of in a tailings impoundment in a specific instance, a request for approval by the Commission should be prepared.

4. The 11e.(2) licensee must demonstrate that the material is not subject to applicable Resource Conservation and Recovery Act regulations or other U.S. Environmental Protection Agency standards for hazardous or toxic wastes prior to disposal.

5. The 11e.(2) licensee must demonstrate that there are no Comprehensive Environmental Response, Compensation and Liability Act issues related to the disposal of the non-11e.(2) byproduct material.

6. The 11e.(2) licensee must demonstrate that there will be no significant environmental impact from disposing of this material.

7. The 11e.(2) licensee must demonstrate that the proposed disposal will not compromise the reclamation of the tailings impoundment by demonstrating compliance with the reclamation and closure criteria of appendix A of 10 CFR part 40.

8. The 11e.(2) licensee must provide documentation showing approval by the Regional Low-Level Waste Compact in whose jurisdiction the waste originates as well as approval by the Compact in whose jurisdiction the disposal site is located.

9. The Department of Energy should be informed of the Nuclear Regulatory Commission findings and proposed action, with an opportunity to provide comments within 30 days, before granting the license amendment to the 11e.(2) licensee.

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10. The mechanism to authorize the disposal of non-11e.(2) byproduct material in a tailings impoundment is an amendment to the mill license under 10 CFR Part 40, authorizing the receipt of the material and its disposal. Additionally, an exemption to the requirements of 10 CFR Part 61, under the authority of § 61.6, must be granted. The license amendment and the § 61.6 exemption should be supported with a staff analysis paper addressing the issues discussed in this guidance.

NRC Staff Analysis of Disposal of Non-Atomic Energy Act of 1954. Section 11e.(2) Byproduct Material in Tailings Impoundments

1. Introduction

Recently, the Nuclear Regulatory Commission (NRC) received several requests to allow activities other than the normal processing of native uranium ore at licensed uranium milling facilities. We have, in the past, received, and, in some cases, approved, similar requests. These requests have fallen into two categories. The first category of requests is to allow the processing of feedstock material that is not usually thought of as ore, for the extraction of uranium, and then dispose of the resulting wastes and tailings in the facility's tailings pile. The second category of requests is to allow the direct disposal of non-Atomic Energy Act (AEA) of 1954, section 11e.(2) byproduct material n1 [hereafter designated as "non-11e.(2) byproduct material"], that was not generated onsite, into tailings piles.

n 1 For the purposes of this analysis, 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.

In assessing these requests, the staff has raised two policy concerns related to tailings piles. The first concern is that the requested activity might result in complicated, dual, or even multiple regulation of the tailings pile, and the second concern is that the requested activity might jeopardize the ultimate transfer to the United States Government, for perpetual custody and maintenance, of the reclaimed tailings pile.

This analysis addresses the second category of requests, that is, requests to dispose of non-11e.(2) byproduct material in tailings piles. Issues relating to such proposals requesting regulatory consideration of commingling of tailings with other radioactive wastes are discussed. This analysis is limited to options involving commingling with existing tailings impoundments.

2. Background

The Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978 amended the AEA to specifically include uranium and thorium mill tailings and other wastes from the process as radioactive material to be licensed by NRC. Specifically, the definition of byproduct material was revised in Section 11e.(2) of the AEA, to include ". . . the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content."

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The definition of byproduct material n2 in Section 11e.(2) of the AEA includes all the wastes resulting from the milling process, not just the radioactive components. In addition, Title II of UMRCA amended the AEA to explicitly exclude the requirement for the Environmental Protection Agency (EPA) to permit 11e.(2) byproduct material under the Resource Conservation and Recovery Act (RCRA). The designation of 11e.(2) byproduct material contrasts significantly with the situation for source material n3 and other radioactive materials controlled under the authority of the AEA. This possibility for dual regulation by both NRC and EPA can become an issue when dealing with mixed hazardous wastes. As a result of UMRCA, NRC amended 10 CFR Part 40 to regulate the uranium and thorium tailings and wastes from the milling process. Thus, under normal operation, all the tailings and wastes in an NRC or Agreement State licensed mill producing uranium or thorium are classified as "11e.(2) byproduct material," and are disposed of in tailings piles regulated under Part 40. They are not subject to EPA regulation, under RCRA. However, the EPA Clean Air Act regulations still result in direct EPA permit authority over the mill tailings, whether or not they are commingled with non-11e.(2) byproduct material waste.

n 2 Henceforth, byproduct material as defined in Section 11e.(2) of the AEA will be referred to as "11e.(2) byproduct material."

n 3 Except in the case of source material ore, source material consists only of the radioactive components of the waste, that is; uranium, thorium, or any combination of the two [10 CFR 40.4(h)].

The UMRCA also required and provided for long-term custody and surveillance of the byproduct material and the land use for its disposal. The Department of Energy (DOE) is the Federal agency currently designated as the "custodial agency" by the AEA. However, the UMRCA specifically referred only to 11e.(2) byproduct material. UMRCA contains no provision allowing for the transfer of custody or title, and hence for eventual long-term custody and surveillance of other material, even if the material were no more radioactive or toxic than the uranium or thorium tailings themselves.

3. The Category of Requests for Commingled Disposal To Be Addressed

Some licensees have proposed to directly dispose of radioactive wastes in existing uranium mill tailings sites. The materials vary from tailings from extraction processes for metals and rare-earth metals (such as copper, tantalum, columbium, zirconium) to spent resins from water-treatment processes. However, because these materials did not result from the extraction or concentration of uranium or thorium from ore, they are not 11e.(2) byproduct material. Many of these "orphaned" wastes have elevated concentrations of source material, and unless otherwise exempted, require licensed control, if the materials exceed the 0.05-percent licensable (content of source material by weight) criterion in 10 CFR Part 40. Some of the wastes proposed for commingling contain radioactive material, not regulated by NRC, that classify as naturally-occurring and accelerator-produced radioactive material (NARM) and as such cannot be easily disposed of. In most of the proposals the staff has seen, disposal of these materials in tailings impoundments would not significantly increase the effect on the public health, safety, and environment. Because of the relatively large volumes of these wastes, low-level waste disposal options are limited. These wastes are similar to tailings in volume, radioactivity, and toxicity. Therefore, some waste producers see the mill tailings disposal sites as

providing an economical option for such disposal.

4. Types of Wastes Being Proposed for Disposal Into Tailings Piles

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 illustrate 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:

4.1 Mine Wastes

To mine uranium or other source material ore from underground or open-pit mines, operators frequently need to dewater the mine cavities. This results in quantities of mine water with suspended or dissolved constituents, some of which are source material. After processing the mine water to satisfy National Pollution Discharge Elimination System or other release requirements, the resultant clean mine water is then discharged offsite. In some cases, the resulting water-treatment filter-cake or sludge residues exceed the 0.05-percent licensable limit for source material. These residues do not satisfy the definition of 11e.(2) byproduct material, because they do not result from the extraction or concentration of uranium or thorium from ore.

NRC and the Agreement States have been contacted by licensees and waste generators that desire to dispose of such filter-cake or sludge residue directly into the tailings piles at licensed uranium mill tailings sites. NRC has indicated that such material does not constitute 11e.(2) byproduct material.

4.2 Secondary Process Wastes

Frequently, natural ores that are processed for rare-earth or other metals have significant concentrations of radioactive elements. Examples include copper, zirconium, and vanadium ores. Sometimes the uranium is captured in a side-stream recovery operation, in which uranium is precipitated out of the pregnant solution, before or after the rare earth or other metal. Although this side-stream recovery operation is licensed by NRC, the tailings (which consist of the crushed depleted ore and the depleted solution after recovery of metals and rare earths) are not 11e.(2) byproduct material. This is because the ore was not processed primarily for its source material content, but for the rare earth or other metal. If the tails contain greater than 0.05 percent uranium and thorium, they would be source material and would thus be licensable and have to be disposed of in compliance with NRC regulations. NRC has received requests from NRC and Agreement State licensees to dispose of such tailings (resulting from processes to extract other metals) into licensed uranium mill tailings piles.

4.3 Formerly Utilized Sites Remedial Action Program (FUSRAP)

These sites primarily processed material, such as monazite sands, to extract thorium for commercial applications. Government contracts were issued for thorium source material used in the Manhattan Engineering District and early Atomic Energy Commission programs. Wastes resulting from that processing and disposed of at these sites would qualify as 11e.(2) byproduct material. However, it is not clear that all the contaminated material at these sites result from

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processing of ore for thorium. At some sites there was also processing for rare earths and other metals. The DOE, which accepts responsibility for the PUSRAP materials, is investigating options for disposal and control of these materials. DOE estimates that a total of 1.7 million cubic yards of material is located at sites in 13 States. Recent proposals have considered the transportation of PUSRAP materials from New Jersey to tailing piles at uranium mills in other States, such as Utah, Washington, and Wyoming.

4.4 NARM

These wastes result from a wide range of operations, but are not generally regulated by the AEA. Past requests for disposal in uranium mill tailing ponds have included contaminated resins from ion-exchange well-water purifying operations. NRC has also received inquiries regarding the disposal of construction scrap and radium-contaminated soil from old commercial operations. The individual States usually administer the regulatory responsibility over NARM, but many other Federal agencies have jurisdictional responsibilities related to NARM. These include EPA, the Consumer Product Safety Commission, the Department of Health and Human Services, and the Department of Labor. There is a State-licensed NARM disposal facility in Clive, Utah, licensed to Envirocare of Utah, Inc.

Two common elements run through most of the requests we have received for direct disposal of non-11e.(2) byproduct material in tailings piles: the material is of low specific-activity, and the material is physically similar to 11e.(2) byproduct material. Most of the requests are for bulk material like soil, crushed rock, or sludges, contaminated with source material in relatively low concentrations.

5. Previous Staff Guidance

In response to a request from Region IV, the Director of the Office of Nuclear Material Safety and Safeguards (NMSS) provided guidance for addressing requests to allow the disposal of non-11e.(2) byproduct material in licensed mill tailings impoundments. The staff considered that the types of material proposed for such disposal could be separated into two categories: (1) NARM wastes; and (2) wastes generated by operations regulated under the AEA.

In the guidance, the staff concluded that it would not approve a policy of allowing disposal of NARM wastes in tailings impoundments. A major concern was that NRC did not have authority to regulate NARM. If States or EPA became involved in regulation of NARM, a situation with duplicative jurisdiction with respect to the commingled radioactive materials could be created. Furthermore, the Commission's authority, under section 84c of the AEA, to approve alternatives to requirements, if the NARM wastes were to violate standards, would be impaired.

The staff viewed the other category, wastes generated by operations regulated under the AEA, as potentially acceptable in a mill tailings impoundment. Each such proposal should be considered on a case-specific basis. The guidance identified four findings that would have to be made before NRC would authorize such disposal.