

ENVIROCARE OF UTAH, INC.
THE SAFE ALTERNATIVE

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VIA FACSIMILE (301-415-3725) and U.S. MAIL

James Lieberman, Esq.
U.S. Nuclear Regulatory Commission
Office of the General Counsel
Mail Stop: 15D21
One White Flint North Building
11555 Rockville Pike, Room 14E16
Rockville, Maryland 20852-2738

Re: Maywood FUSRAP Site and My Letter of February 22, 2001

Dear Mr. Lieberman:

Thank you for providing the opportunity for Len Bickwit and me to present our views to you last week on the legal status of the mill tailings at the Maywood, New Jersey, FUSRAP site. The attached discussion points reflect those views, as well as related positions we presented to your colleagues on March 28, 2001 and points we have developed since our discussion.

As I mentioned last week, I would like to modify my letter of February 22, 2001 to Mike Weber at the NRC as to the confirmation of your position on the Maywood mill tailings. As we have discussed, we firmly believe that all of the Maywood mill tailings are 11e.(2) material. Please consider our views on this subject and, if you ultimately find those views persuasive, I ask that you modify the position expressed on this matter in the NRC's letter of January 26, 2001. Please include your response in your letter responding to my letter of February 22.

As you may be aware, the Army Corps of Engineers' contractor at the Maywood site has initiated a procurement regarding the disposal of the Maywood waste. It no doubt would be best for all concerned if the NRC's views on both the source material issue referred to in

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my earlier letter and the 11e.(2) issue referred to in this letter were known as soon as possible in view of this pending procurement.

If we can provide any further assistance in clarifying our position on these matters, we would be pleased to do so at your convenience. As you know, we strongly disagree with the Director's Decision of December 13, 2000 on the NRC's authority over mill tailings. Nonetheless, accepting the NRC's position in the Decision as correct for the sake of argument, the application of the reasoning in the Decision to the issues at the Maywood site in the manner proposed in the NRC's January letter is a serious departure from the provisions of the Uranium Mill Tailings Control Act and the Decision itself.

Thank you again for your time and your consideration of our requests.

Yours sincerely,



Jonathan P. Carter
General Counsel

Enclosure

cc: Michael F. Weber, U.S. Nuclear Regulatory Commission, NMSS/FCSS,
via facsimile, w/enclosure
Myron H. Fliegel, U.S. Nuclear Regulatory Commission, NMSS/DWM/URLL,
via facsimile, w/enclosure

THORIUM TAILINGS IN MAYWOOD **ARE SUBJECT TO THE NRC'S JURISDICTION**

Basic Thesis

The thorium mill tailings located at the FUSRAP site in Maywood, New Jersey, were "produced . . . by a person licensed by the NRC as of the effective date of UMTRCA or thereafter." Accordingly, the NRC has jurisdiction over all such material. The quoted language, which is taken from the December 13, 2000, NRC Director's Decision on NRC mill tailings regulation, constitutes one of several tests from that decision that are intended to determine when mill tailings should be considered section 11e.(2) material. This paper asserts the test quoted above will most readily produce a result regarding Maywood's mill tailings that is consistent with Congress's intent in enacting UMTRCA. It is not conceivable that Congress intended, in a statute whose principal purpose was to enhance NRC regulatory authority over mill tailings, to deny the NRC regulatory jurisdiction over any of the tailings that are now at Maywood, given that (i) the AEC and the NRC have had an extensive historical involvement in licensing source material activities at what is now the Maywood FUSRAP site; (ii) the NRC was actually regulating tailings under a license issued to a longstanding AEC and NRC licensee, Stepan Chemical Company, at the time of UMTRCA's enactment; (iii) all of the tailings at Maywood were produced by a facility that was owned by Stepan or its predecessor in interest, Maywood Chemical Works, at all times during the life of the facility; (iv) production, possession and storage at the facility itself were earlier licensed by the AEC; and (v) the site, according to the DOE, was one that over the years "had been used essentially for commercial ventures." Accordingly, the NRC should apply the test quoted above and determine that all of the Maywood tailings are subject to its jurisdiction.

Brief History

Maywood Chemical Works was founded in 1895. From 1916 to 1956, Maywood Chemical Works extracted thorium and rare earth elements from monazite sands for use in commercial products. Originally the company used thorium to produce gas mantles containing thorium nitrate. During World War II, some of the monazite sands processed by Maywood Chemical Works were used to produce lanthanum oxide, which was used by Eastman Kodak in the manufacture of optical lenses for the U.S. Army.

Maywood Chemical Works used thorium residues as fill in a swampy area on its property, and the company later built on this area. In addition, the company used large areas just outside its property as dumping areas for process wastes that included large quantities of thorium. This included land through which, in 1932, NJ Route 17 was built, as well as lands west of Route 17. (Maywood Chemical Works, i.e., the present Stepan property, was located east of Route 17.) Thorium wastes also spread via the former Lodi Brook onto properties where commercial buildings and residences were later built, and some wastes were used on nearby properties as mulch and fill.

Source material activities at and near the Maywood processing facility were continuously licensed by the AEC from 1954 to 1972. Maywood Chemical Works was the original licensee in

1954. The 1954 license, STC-130, authorized possession and processing of source material. Maywood Chemical Works ceased thorium production in 1956 and stopped processing monazite sands the following year. In 1959, Stepan Chemical Company acquired Maywood Chemical Works. In 1961, the AEC granted Stepan a renewal of license STC-130 that prohibited processing but that specifically allowed Stepan to sell thorium inventory on hand from previous operations. Subsequent license renewals were for storage only.

In 1963, with the knowledge of the AEC, Stepan began cleanup of waste material that had been stored in a number of dikes and piles. In 1966, Stepan buried 8,358 cubic yards of material from east of Route 17 in what is now known as Pit 1. In 1967, it buried 2,053 cubic yards of such material in Pit 2. In 1968, the AEC granted Stepan permission to relocate additional wastes, and Stepan buried 8,600 cubic yards of waste in Pit 3. Source Material License No. STC-130 was subsequently allowed to expire on May 31, 1972.

In late 1976, the NRC noted that Stepan "possessed [in 1972] and apparently still possesses roughly 250,000 ft.³ of thorium residues which are buried on their property." Letter from Gen W. Roy to P.R. Nelson dated Dec. 13, 1976. The NRC took steps to require Stepan to "apply for renewal of their license." *Id.* In 1977, Stepan submitted an application for renewal of source material license STC-130 that indicated "[a]t two locations [a]pprox. 9500 cu. yd. of [t]horium waste tailings are buried." The NRC granted a "Materials License" numbered STC-1333 on April 4, 1978. Under the heading "Byproduct, source, and/or special nuclear material," the NRC listed "Thorium." The license further indicated that the license covered 9,500 cubic yards of buried alkaline thorium phosphate tailings.

In the early 1980's, Stepan was required to add the third pit to its source material license, and a company official was fined \$20,000 for withholding information about the material in the third pit. Accordingly, Stepan's 1983 application for renewal was for "Thorium content about 0.1% in about 9500 yd³ of tailings & about 0.25% in about 8600 yd³ of tailings."

In a related development, in the early 1980's it was discovered that thorium contamination in Maywood was much more widespread than was previously thought, in areas both on and off Stepan's property. The mayor of Maywood wrote to the NRC requesting assistance in dealing with the problem. While the NRC acknowledged regulatory jurisdiction over the material, it disclaimed any authority for the agency itself to conduct an independent cleanup of the material. In 1983, Maywood was added to the National Priorities List for Superfund cleanup, and in 1984, Congress appropriated funds to DOE for cleanup of the site.

DOE treated thorium wastes at the Maywood site as 11e.(2) material. It remediated numerous residential properties between 1984 and 1986, storing waste materials on federal property acquired for that purpose from Stepan Chemical. From 1994 to 1996, DOE shipped 35,000 cubic yards of this 11e.(2) material by rail for disposal at licensed 11e.(2) disposal facilities. When FUSRAP was transferred to the Army Corps of Engineers in 1997, the Corps assumed responsibility for cleanup at the Maywood site.

Discussion Points

1. In a letter dated January 26, 2001, the NRC set forth a test for determining whether tailings are or are not 11e.(2) material. That test, as applied to the Maywood site, does not produce the result stated in the letter and suffers from other critical defects.
 - The January letter states that the NRC "lacks jurisdiction over tailings produced at a facility not licensed by the NRC on the effective date of [UMTRCA] or thereafter." (Emphasis added.)
 - The letter concludes that the material in the Maywood pits is 11e.(2) material, but that no other material at the Maywood site meets the test of the letter.
 - Yet none of the tailings at the Maywood site, including the tailings in the pits, meets this test. The facility that produced the tailings (the processing facility of Maywood Chemical Works) was last licensed for processing in 1961.
 - Moreover, if the test in the January letter is correct, all of the NRC's post-UMTRCA actions relating to non-source material in the pits — including licensing Stepan and fining Stepan for not disclosing pit 3 — were ultra vires. Under the test, the NRC never had authority over such material.
 - Most significantly, as discussed in point 3 below, there is no possibility that the Congress that enacted UMTRCA would have wished to exclude from NRC jurisdiction all the tailings that this test would exclude, (i.e., all of the non-source material tailings at Maywood). Since the purpose of the test is to reflect Congressional intent, the test is not viable as it relates to Maywood.
2. An alternative test implicit in the January letter is arbitrary and would produce anomalous results.
 - The January letter alternatively suggests that the applicable test is whether the tailings themselves were specifically covered by an NRC license effective on or after UMTRCA's enactment. That would mean that whatever tailings NRC chose to license, regardless of the theory used (or even if there were a mistaken application of the correct theory), are 11e.(2) material. This means essentially that there is no standard; the NRC may do as it pleases. Congress certainly did not contemplate such a "test."
 - This test, moreover, would mean that all mill tailings at Envirocare's 11e.(2) disposal facility, including tailings where neither the person nor the facility producing the tailings was licensed on or after UMTRCA's enactment, are 11e.(2) material. In correspondence and meetings with Envirocare, the NRC has consistently indicated otherwise.
 - In addition, this test would arbitrarily distinguish between material specifically licensed by the NRC and material otherwise subject to NRC regulation. The regulatory history of the Maywood site demonstrates the arbitrariness of this

distinction. In a 1982 letter to the mayor of Maywood, the NRC explained that it was regulating material outside the pits: "The NRC continues to regulate Stepan's activities with regard to the thorium on its property as well as Stepan's handling of the thorium waste located on the private land west of Route 17 in Rochelle Park, New Jersey." Letter from Ronald C. Haynes to John A. Stuart, Jr., dated Nov. 1, 1982. It is not reasonable to contend that Congress intended to cover under UMTRCA material specifically included in an NRC license, but intended not to cover other material that the NRC regulated after 1978.

- Other documents from the early 1980's regarding thorium mill tailings at Maywood also show that the NRC asserted regulatory jurisdiction over material not specifically referred to in the NRC licenses for the Maywood pits. When New Jersey considered cleaning up the residential properties itself, it inquired of the NRC regarding licensing for such activities. The NRC at one point indicated in a letter to the New Jersey Department of Environmental Protection that "[t]he Stepan Chemical Company source material license could be amended to authorize the receipt and storage" of "thorium contaminated soil from the private residences in Maywood, New Jersey." Letter dated July 2, 1981, from R.G. Page to M. Stanton, at 1. "As was discussed, [the NRC] will be happy to cooperate with the State of New Jersey in any way possible to resolve this problem, including providing radiological monitoring at the residences during the decontamination efforts." Id.

3. Rejecting jurisdiction over any Maywood tailings, whether in or out of the pits, (i.e., adopting either of the above two tests) is directly at odds with congressional intent.

- Maywood is precisely the kind of site that Congress insisted on subjecting to NRC mill tailings regulation. It is a site where most of the tailings were produced in commercial and/or licensed activities, and where the NRC had clearly indicated at the time of UMTRCA's enactment its intention to regulate the site's thorium tailings. All the thorium tailings at the site of which the NRC had been apprised by Stepan — pits 1 and 2 — were under license, and when other tailings were later discovered, the NRC either licensed the tailings (as with pit 3) or stated that these tailings were otherwise subject to its regulatory authority.
- The idea that Congress intended to preclude the NRC from licensing any non-source material thorium tailings in or near the already-licensed pits is not rational. Likewise, the view that it intended to deny the NRC jurisdiction over any other tailings later discovered on or near the Stepan property, and produced by the same operations that produced the pit material, cannot be correct. In short, the thought that Congress did not intend to cover all such tailings, in a statute specifically designed to allow the NRC to regulate mill tailings after license terminations, is untenable. In this regard, it is relevant to ask how a member of the Congress that enacted UMTRCA would have responded to the following question: "If, at a site containing thorium mill tailings that are subject to a current NRC source material license, thorium mill tailings of a lower concentration (below 0.05%) produced by the same facility that produced the licensed tailings are later found on and around that same property, are those tailings intended to be off-limits to NRC regulation?" One cannot conceive of an affirmative

answer. Add to that the fact that the facility itself was formerly under a source material license and was at all times during the life of the facility owned by the current licensee or its predecessor in interest, and that proposition becomes even more certain.

4. The Director's Decision includes another test for determining NRC jurisdiction that produces a reasonable result in these circumstances and is far more consistent with congressional intent than either of the tests discussed above.

- The Director's Decision contains numerous tests, but one in particular could be relied on here: "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." DD-00-06 (hereinafter "Decision") at 19.
- By referencing this test, the Decision suggests that UMTRCA was to give the NRC additional authority over its existing licensees, but was not designed to expand the universe of NRC-regulated entities beyond those licensees. This is the very least the Congress intended to accomplish in UMTRCA.
- Stepan was an NRC licensee in 1978, and its predecessor in interest, Maywood Chemical Works, is the undisputed source of all the thorium contamination in the Maywood area. Therefore, all the Maywood material should be regarded as subject to NRC jurisdiction.

5. This last test is consistent with the Decision's view of UMTRCA's legislative history.

- The Decision indicates that sites discussed by Dr. James Liverman of DOE in legislative hearings were to be excluded from Title II because, although these sites were similar to Title I sites, DOE already had authority to remediate them. That authority, according to Dr. Liverman's testimony, stemmed from the AEC's possible liability for having cleaned up the sites in question incompletely before turning the sites over to the private sector. See, e.g., Uranium Mill Tailings Control: Hearings on H.R. 13382, H.R. 12938, H.R. 12535 and H.R. 13049, H.R. 13650 Before the Subcomm. on Energy and the Environment of the Comm. on Interior and Insular Affairs, 95th Cong. 49 (1978). The Maywood site does not fit the description of the sites Dr. Liverman was referring to. First, DOE had no liability or authority with respect to Maywood of the sort that Dr. Liverman described. Second, Maywood is not similar to Title I sites and could never have been remediated under Title I, because it was not a site where "all or substantially all of the uranium was produced for sale to any Federal Agency prior to January 1, 1971, under a contract with any Federal agency." UMTRCA § 101(6). Finally, unlike the sites that Dr. Liverman appeared to have in mind, Maywood was a site on which an active NRC licensee was still subject to ongoing NRC regulation at the time of UMTRCA's enactment.
- While the Decision indicates that Title II of UMTRCA was intended to focus on "active sites," the Decision also makes clear that certain inactive mill tailings sites would be subject to Title II. The Decision indicates that sites such as Edgemont,

South Dakota, that were inactive but still licensed when UMTRCA was enacted are subject to the NRC's Title II authority and, in particular, to 10 C.F.R. § 40.2a. The Decision specifically states: "[s]ection 40.2a is intended to address . . . the inactive, but still licensed site." Decision at 18 (emphasis added). Maywood should be viewed as falling into this category.

- The NRC could of course distinguish between Edgemont, where the milling facility itself was licensed after 1978, and Maywood, where it was not. If the purpose of that distinction is to reflect congressional intent, however, the distinction is ill-conceived. The discussion in point 3 above demonstrates that reliance on that distinction to exclude Maywood tailings from NRC jurisdiction would be seriously at odds with congressional intent.
6. Maywood's post-UMTRCA designation as a FUSRAP site is not relevant to determining whether material at the site is 11e.(2) material.
- The January letter acknowledges that Maywood's inclusion in FUSRAP should not be considered to remove the material in the pits from the NRC's 11e.(2) jurisdiction.
 - Moreover, the Decision itself indicates that inclusion of a site in FUSRAP does not by itself exclude the site's tailings from NRC jurisdiction. The Decision, rather, applies the various tests discussed above to determine the reach of that jurisdiction. Consistent with that approach, the Decision states: "A review of UMTRCA as a whole . . . supports the conclusion that the NRC lacks jurisdiction over most FUSRAP material. Decision at 8 (emphasis added). The Decision also includes the following quote from the NRC's 1999 Director's Decision involving FUSRAP mill tailings: "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 residuals at those sites." Decision at 3 (emphasis added). In sum, the NRC has consistently indicated that the applicable test is what matters, not the inclusion of a site in FUSRAP.
 - In any event, Maywood, as noted above, differs markedly from the typical FUSRAP site. According to the DOE, "Most FUSRAP sites were MED/AEC sites used for processing, handling, and storing radioactive materials. . . . The 1984 Energy and Water Development Appropriations Act (EWDAA) (Public Law 98-50) authorized DOE to conduct a decontamination research and development project at four sites that had been used essentially for commercial ventures. These sites include . . . Maywood and Wayne in New Jersey." U.S. Department of Energy, FUSRAP Management Requirements and Policies Manual, at 1-4 (Rev. 2, May 5, 1997) (emphasis added). While some of Maywood's thorium production was used in lenses made for the Army during World War II, this constituted only a fraction of Maywood's historical production since the late 1800's.

Conclusion

The NRC should affirm that it possesses regulatory jurisdiction over all thorium mill tailings at the Maywood site, including the material outside Pits 1, 2 and 3. This is the only result that is consistent with congressional intent and that fairly accounts for the NRC's and AEC's extensive involvement in licensing activities at the site. As advocated in this paper, it should reach that result by determining, under the test of the Director's Decision discussed above, that all such tailings were "produced . . . by a person licensed by the NRC as of the effective date of UMTRCA or thereafter."

Alternatively, notwithstanding much of what has been argued in this paper, the NRC could also reach that result through a different – and less literal – application of the test of the NRC's January letter than the paper assumes was intended by that letter. As discussed in the "Brief History" section above, both the NRC and Stepan regarded Stepan's application for license STC-1333, and presumably the license itself, as a "renewal" of license STC-130. STC-130 in its various incarnations did in fact relate to activities regarding the Maywood processing facility. In that sense, a "renewal" of STC-130 could also be viewed as a license regarding that facility. If the NRC chooses to apply the test of its January letter in this manner, it could regard all the tailings at Maywood as tailings produced at a facility with respect to which a license was effective on or after the effective date of UMTRCA.

Whether either of these approaches is selected, however, the critical matter is that the NRC should clearly determine that all the tailings at Maywood are subject to its jurisdiction. For the reasons stated above, any other determination would be a significant departure from what the UMTRCA Congress intended and directed.