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Part III

Environmental Protection Agency

40 CFR Part 61

National Emissions Standards for Hazardous Air Pollutants; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 61

[FRL-5011-1]

RIN 2060-AE23

National Emissions Standards for Hazardous Air Pollutants

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is rescinding 40 CFR part 61, subpart T (subpart T) as it applies to owners and operators of uranium mill tailings disposal sites licensed by the Nuclear Regulatory Commission (NRC) or an affected Agreement State (Agreement States). As required by section 112(d)(9) of the Clean Air Act as amended, EPA has determined that the NRC regulatory program protects public health with an ample margin of safety to the same level as would implementation of subpart T. Subpart T is a National Emission Standard for Hazardous Air Pollutants (NESHAPs) which was published on December 15, 1989 and which regulates emissions of radon-222 into the ambient air from uranium mill tailings disposal sites. Subpart T continues to apply to unlicensed uranium mill tailings disposal sites currently regulated under subpart T that are under the control of the Department of Energy (DOE).

DATES: This rule is effective June 29, 1994. The provisions in this rule will be applied immediately to all affected facilities including existing sources. Under section 307(b)(1) of the Clean Air Act, judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit within 60 days of publication of this rule. Under section 307(b)(2) of the Act, the provisions which are the subject of today's rule will not be subject to judicial review in any civil or criminal proceedings brought by EPA to enforce these requirements.

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SUPPLEMENTARY INFORMATION:

Docket

Docket A-91-67 contains the rulemaking record. The docket is available for public inspection between the hours of 8 a.m. and 4 p.m., Monday through Friday, in room M1500 of Waterside Mall, 401 M Street, SW, Washington, DC 20460. A reasonable fee may be charged for copying.

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1. Background

A. Description of Uranium Mill Tailings

Uranium mill tailings are sand-like wastes that result from the processing of uranium ore. Tailings are stored in large surface impoundments, called piles, in amounts from less than one million tons to over thirty million tons, over areas that may cover hundreds of acres. Most piles are located in the Western United States, and all piles emit radon gas, a decay product of radium in the waste material resulting from the processing of ore to recover uranium at the uranium mills.

B. Regulatory History

To deal specifically with the risks associated with these tailings, Congress passed the Uranium Mill Tailings Radiation Control Act (UMTRCA) in 1978 (42 U.S.C. 2022, 7901-7942). In enacting UMTRCA, Congress found that uranium mill tailings may pose a potential and significant radiation health hazard to the public, and that every reasonable effort should be made to provide for the stabilization, disposal, and control in a safe and environmentally sound manner of such tailings in order to prevent or minimize radon diffusion into the environment and to prevent or minimize other environmental hazards from such tailings. See 42 U.S.C. 7901(a). Under UMTRCA, two programs were established to protect public health and the environment from the hazards associated with uranium mill tailings. One program (Title I) required the Department of Energy (DOE) to conduct the necessary remedial actions at designated inactive uranium mill tailing sites to achieve compliance with the general environmental standards to be promulgated by EPA. These sites were generally abandoned uranium processing sites for which a license issued by the NRC or its predecessor, the Atomic Energy Commission (AEC), was not in effect on January 1, 1978. The other program (Title II) pertained to active sites, which are those that are licensed by the NRC or an affected Agreement State. Requirements for licensed sites include the final disposal of tailings, including the control of radon after milling operations cease. UMTRCA also required that EPA promulgate standards for these licensed sites, including standards that protect human health and the environment in a manner consistent with standards established under Subtitle C of the Solid Waste Disposal Act, as amended. The NRC, or an Agreement State, is responsible for implementing the EPA standards at licensed uranium milling sites.

As part of NRC's 1982 authorization and appropriations, Congress amended UMTRCA on January 4, 1983. Public Law 97-415, sections 18(a) and 22(b), *reprinted in* 2 1982 U.S. Code Cong. & Admin. News (96 Stat.) 2077 and 2080. As partially amended thereby, EPA was required to promulgate standards of general applicability for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with the processing and with the possession, transfer, and disposal of byproduct material as defined under section 11e(2)

of the AEA, e.g., uranium mill tailings. Requirements established by the NRC with respect to byproduct material must conform to the EPA standards. Any requirements of such standards adopted by the NRC shall be amended as the NRC deems necessary to conform to EPA's standards. In establishing such standards, the Administrator was to consider the risk to the public health, safety, and the environment, the environmental and economic costs of applying such standards, and such other factors as the Administrator determines to be appropriate. See 42 U.S.C. 2022(b)(1).

As promulgated by EPA under subpart D of 40 CFR part 192 in 1983 and implemented by NRC pursuant to its regulations at 10 CFR part 40, appendix A, a Title II site licensed by NRC or an Agreement State, could indefinitely continue to emit radon at levels that could result in risks higher than allowed under the CAA. It was this possibility which compelled EPA to promulgate subpart T of 40 CFR part 61 under CAA section 112. In addition, the UMTRCA regulations called for an impoundment design that would achieve compliance with the 20 pCi/m^2-s flux standard for 1,000 years, or at least 200 years, but prior to the recent EPA amendments did not include any requirement that monitoring occur to verify the efficacy of the design.

On October 16, 1985, NRC promulgated rules at 10 CFR part 40, appendix A to conform NRC's regulations issued five years earlier to the provisions of EPA's general UMTRCA standards other than those affecting groundwater protection at 40 CFR part 192 (50 FR 41852). NRC completed conforming amendments for groundwater protection in appendix A of 10 CFR part 40 in 1987.

Neither the UMTRCA standards promulgated by EPA in 1983 nor the NRC standards promulgated in 1980 and amended in 1985, established compliance schedules to ensure that non-operational tailings piles would be closed, and that the 20 pCi/m^2-s standard would be met, within a reasonable period of time. Moreover, the EPA standards and NRC criteria also did not require monitoring to ensure compliance with the flux standard. 50 FR 41852 (October 16, 1985). To rectify these shortcomings of the then current EPA and NRC programs regulating uranium mill tailings, EPA promulgated standards under Section 112 of the CAA on October 31, 1989, to ensure that the piles would be closed in a timely manner with monitoring.

On December 15, 1989, EPA published national standards regulating radionuclide emissions to the ambient air from several source categories, including non-operational sites used for the disposal of uranium mill tailings. (54 FR 51654). These sites are either under the control of the DOE pursuant to Title I of the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978, 42 USC 7901 *et. seq.*, or are under the control of NRC or Agreement State-licensees pursuant to Title II of UMTRCA. These standards—subpart T of 40 CFR part 61 (subpart T)—were promulgated pursuant to the authority of Clean Air Act (CAA or Act) section 112 as it existed in 1989.

Prior to today's action, subpart T of 40 CFR part 61, limited radon-222 emissions to the ambient air from non-operational uranium mill tailings disposal sites licensed by the NRC or an affected Agreement State. Subpart T required that these sites, which consist of large (i.e., numerous acre) impoundments or piles, comply with a radon flux standard of 20 pCi/m^2-s. 40 CFR 61.222(a). Moreover, compliance must be achieved within two years of when the site becomes non-operational, 40 CFR 61.222(b), which for piles which had ceased operation prior to the time of promulgation was no later than December 15, 1991. While at the time of promulgation EPA recognized that many sources might not be able to achieve this date, EPA was constrained by then existing CAA section 112(c)(1)(B)(ii) which allows a maximum of two years for facilities to come into compliance. EPA stated that for those sites which could not meet the two-year date, the Agency would negotiate expeditious compliance schedules pursuant to its enforcement authority under CAA section 113. See 54 FR 51683. Subpart T also called for monitoring and recordkeeping to establish and demonstrate compliance. See 40 CFR 61.223 and 61.224.

Subpart T was part of a larger promulgation of radionuclide NESHAPs that represent the Agency's application of the policy for regulating pollutants under then existing CAA section 112, which was first announced in the benzene NESHAPs. 54 FR 38044 (September 14, 1989). The NESHAPs policy utilized a two-step approach. In the first step, EPA considered the lifetime risk to the maximally exposed individual, and found that it is presumptively acceptable if it is no higher than approximately one in ten thousand. This presumptive level provides a benchmark for judging the acceptability of a category of emissions. This first step also considers other health and risk factors such as projected incidence of cancer, the estimated number of persons exposed within each individual lifetime risk range, the weight of evidence presented in the risk assessment, and the estimated incidence of non-fatal cancer and other health effects. After considering all of this information, a final decision on a safe level of acceptable risk is made. This becomes the starting point for the second step, determining the ample margin of safety.

In the second step, EPA strives to provide protection for the greatest number of persons possible to an individual lifetime risk level no higher than approximately one in one million. In this step, the Agency sets a standard which provides an ample margin of safety, again considering all of the health risk and other health information considered in the first step, as well as additional factors such as costs and economic impacts of controls, technological feasibility, uncertainties, and any other relevant factors.

EPA noted that standards it had already promulgated pursuant to UMTRCA (42 U.S.C. 2022, 7901–7942) would eventually limit radon emissions from those sites to a flux of 20 pCi/m^2-s (see 40 CFR part 192, subpart D), and thus EPA referred to that level as "baseline." EPA's risk assessment revealed that compliance with the 20 pCi/m^2-s baseline would result in an estimated lifetime risk to the maximally exposed individual of approximately 1×10^{-4}, a level EPA determined to be safe under the first step of the analysis. EPA further concluded in the second step, which considers additional factors such as cost and technological feasibility, that the baseline level also provided an ample margin of safety.

Even though EPA determined that the baseline was protective of public health with an ample margin of safety, EPA still found it was necessary to promulgate subpart T. This was because the baseline assumed compliance with the UMTRCA regulations even though those regulations did not require that compliance occur in the foreseeable future and, in fact, many sites were not proceeding towards the baseline level at the time subpart T was promulgated. In other words, EPA promulgated subpart T to address the timing issue, which was not addressed in the UMTRCA regulations.

The primary subpart T standard is the requirement that radon-222 emissions not exceed a flux of 20 pCi/m^2-s. 40 CFR 61.222(a). Additionally, it requires that, once a uranium mill tailings pile or impoundment ceases to be operational, it must be disposed of and brought into compliance with the emission limit within two years of the effective date of

the standard (by December 15, 1991) or within two years of the day it ceases to be operational, whichever is later. Lastly, it requires monitoring of the disposed pile to demonstrate compliance with the radon emission limit. See 40 CFR 61.223 and 61.224. In its 1989 action, EPA recognized that even though NRC implements general EPA standards (promulgated under UMTRCA) which also regulate these sites and call for compliance with a 20 pCi/m^2-s flux standard (see 40 CFR part 192, subpart D), the UMTRCA regulatory program did not answer the critical timing concern addressed by subpart T.

The existing UMTRCA regulations set no time limits for disposal of the piles. Some piles have remained uncovered for decades emitting radon. Although recent action has been taken to move toward disposal of these piles, some of them may still remain uncovered for years.

54 FR at 51683. However, due to then-existing CAA section 112(c)(1)(B)(ii), EPA was constrained to requiring compliance with the 20 pCi/m^2-s baseline within two years, a date the Agency recognized many sites might find impossible to meet. EPA announced that those situations could be dealt with through site-specific enforcement agreements under CAA section 113. Because EPA felt constrained by the CAA as it existed at that time, EPA stated that for those sites the Agency would negotiate expeditious compliance schedules pursuant to its enforcement authority under CAA section 113. See 54 FR 51683. By so doing, subpart T in effect mandated that the cover to meet that emissions level be installed as expeditiously as practicable considering technological feasibility.

The numerical radon emission limit of subpart T is the same as the UMTRCA standard at 40 CFR part 192, subpart D (subpart D) (although under UMTRCA, the limit is to be met through proper design of the disposal impoundment, and is to be implemented by DOE and NRC for the individual sites, while under the CAA, the standard is an emissions limit with compliance established by EPA through monitoring). However, the two year disposal requirement and the radon monitoring requirement were not separately required by the then existing UMTRCA regulations.

EPA amended 40 CFR part 192, subpart D on November 15, 1993, (58 FR 60340) to fill a specific regulatory gap with respect to timing and monitoring. Under subpart D, sites are now required to construct a permanent radon barrier pursuant to a design to achieve compliance with the 20 pCi/m^2-s flux standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). EPA announced its goal that this occur by December 31, 1997, for those non-operational uranium mill tailings piles listed in the MOU between EPA, NRC and the affected Agreement States (at 56 FR 67568), or seven years after the date on which the impoundments cease operation for all other piles. The new requirement for verifying the flux with monitoring is meant to assure the efficacy of the design of the permanent radon barrier following construction.

Section 84a(2) of the Atomic Energy Act requires NRC to conform its regulations to EPA's regulations promulgated under UMTRCA. As noted above, the then existing NRC criteria while providing a comprehensive response to EPA's general UMTRCA standards did not compel sites to proceed to final closure by a certain date nor did they require monitoring to confirm the efficacy of the design of the cover. NRC proposed uranium mill tailings regulations to conform the NRC requirements to EPA's proposed amended standards at 40 CFR part 192 subpart D. 58 FR 58657 (November 3, 1993). The final NRC regulations amend Criterion 6 and add a new Criterion 6A together with new definitions in the Introduction to appendix A to part 40 of title 10 of the CFR. (59 FR 28220, June 1, 1994).

These CAA and UMTRCA programs duplicate each other by creating dual regulatory oversight, including independent procedural requirements, while seeking to ensure compliance with the same numerical 20 pCi/m^2-s flux standard. Concern over this duplication inspired several petitions for reconsideration, most notably from NRC, the American Mining Congress (AMC) and Homestake Mining Co. It was also alleged that subpart T was unlawful because it was physically impossible for some sites to come into compliance with subpart T in the time required. While those petitions remained pending before EPA (at least in part), EPA has taken several actions to address the issues they raised, including publishing the proposal to rescind subpart T, as well as the Final Rule to amend 40 CFR part 192, subpart D (UMTRCA regulations) and a Final Rule staying subpart T pending the conclusion of this rulemaking.

C. Clean Air Act Amendments of 1990

After promulgation of subpart T (and receipt of reconsideration petitions), the Clean Air Act was substantially amended in November 1990. Included in the amended Act was an amendment that speaks directly to the duplication issue. Newly enacted section 112(d)(9) provides that no standard for radionuclide emissions from any category or subcategory of facilities licensed by the Nuclear Regulatory Commission (or an Agreement State) is required to be promulgated under section 112 if the Administrator determines, by rule, and after consultation with the Nuclear Regulatory Commission, that the regulatory program established by the Nuclear Regulatory Commission pursuant to the Atomic Energy Act for such category or subcategory provides an ample margin of safety to protect the public health. This provision strives to eliminate duplication of effort between EPA and NRC, so long as public health is protected with an ample margin of safety.

Moreover, Congress expressed sensitivity to the special compliance problems of uranium mill tailings sites through new section 112(i)(3). This provision provides an additional 3-year extension to mining waste operations (e.g., uranium mill tailings) if the 4 years allowed (including a one year extension) for compliance with standards promulgated under the amended section 112 is insufficient to dry and cover the mining waste (thereby controlling emissions).

D. Memorandum of Understanding (MOU) Between EPA, NRC and Affected Agreement States

In July of 1991, EPA, NRC and the affected Agreement States entered into discussions over the dual regulatory programs established under UMTRCA and the CAA. In October 1991, those discussions resulted in a Memorandum of Understanding (MOU) between EPA, NRC and the Agreement States which outlines the steps each party will take to both eliminate regulatory redundancy and to ensure uranium mill tailings piles are closed as expeditiously as practicable. See 56 FR 55434 (MOU reproduced as part of proposal to stay subpart T); see also 56 FR 67537 (final rule to stay subpart T). The primary purpose of the MOU is to ensure that owners of uranium mill tailings disposal sites that have ceased operation, and owners of sites that will cease operation in the future, bring those piles into compliance with the 20 pCi/m^2-s flux standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee) with the goal that all current disposal sites be closed and in compliance with the radon emission standard by the end of 1997, or within

seven years of the date on which existing operations and standby sites enter disposal status. This goal comports with Congress's concern over timing as reflected in CAA section 112(i)(3), as amended.

E. The Settlement Agreement

As contemplated by the MOU, on December 31, 1991, EPA took final action to stay and proposed rescission of subpart T under section 112(d)(9), and issued an advance notice of proposed rulemaking under UMTRCA. See 55 FR 67537, 67561 and 67569. In order to preserve its rights, EDF filed a lawsuit challenging the legality of the stay. *EDF* v. *Reilly*, No. 92–1082 (D.C. Cir.). Litigation had previously been filed by EDF, NRDC, AMC, Homestake and others, challenging subpart T. *AMC, et al.* v. *EPA*, Nos. 90–1058, 90–1063, 90–1068, and 90–1074 (D.C. Cir.). NRC, AMC and Homestake had also filed an administrative petition for reconsideration of subpart T.

Discussions continued with the litigants and NRC, and in February 1993, an agreement was reached to settle the pending litigation and the administrative proceeding, avoid potential future litigation, and otherwise agree to a potential approach to regulation of NRC-licensed non-operational uranium mill tailings disposal sites. See 58 FR 17230 (April 1, 1993) (notice announcing settlement agreement under CAA section 113(g)). NRC agreed in principle with the agreement by letter.

The settlement agreement adds comprehensive detail to, and thereby continues, the approach set forth in the MOU. Actions implemented under the settlement agreement should result in the expeditious control of radon-222 emissions at non-operational uranium mill tailings disposal sites without the delays and resource expenditures engendered by litigation and contentious administrative process. This enables EPA to satisfy the criteria of section 112(d)(9) that EPA find, by rule, that the NRC regulatory program protects public health with an ample margin of safety. It does this, in part, by providing for changing EPA's UMTRCA regulations such that public health would be as well protected under UMTRCA as would implementation of subpart T under the CAA.

II. Rationale for Final Rule To Rescind 40 CFR Part 61 Subpart T for NRC and Agreement State Licensees

In light of the new statutory authority provided EPA by section 112(d)(9) of the Clean Air Act as amended, EPA met with NRC and the affected Agreement States to determine whether, with certain modifications to its regulatory program under UMTRCA, the NRC regulatory program might provide an ample margin of safety. If so, subpart T would be rendered superfluous and, therefore, needlessly duplicative and burdensome such that rescission pursuant to CAA section 112(d)(9) would be appropriate.

In applying the risk methodology for CAA section 112 to the risk assessment for subpart T, EPA has already determined that the baseline that would result once the 20 pCi/m^2-s UMTRCA standard is met protects public health with an ample margin of safety. Thus, since the regulatory program implemented by NRC assures that sites will achieve the baseline (20 pCi/m^2-s) as soon as practicable considering technological feasibility and factors beyond the control of the licensee, the NRC program protects the public to the same extent as subpart T, and subpart T is not necessary for these facilities. More specifically, appropriate modifications to the UMTRCA regulatory scheme as implemented by NRC and the affected Agreement States to ensure specific, enforceable closure deadlines and monitoring requirements such that compliance with the baseline occurs as expeditiously as practicable considering technological feasibility and factors beyond the control of the licensee, protect public health with an ample margin of safety. In so concluding, EPA relies wholly upon the risk analysis it conducted in promulgating subpart T. EPA is not revisiting that analysis here.

A. The Regulatory Scheme Under UMTRCA

As a supplement to the Atomic Energy Act of 1954, as amended, UMTRCA (42 U.S.C. 2022, 7901–7942) was enacted to comprehensively address the dangers presented by uranium mill tailings, including their disposal:

> Uranium mill tailings located at active and inactive mill operations may pose a potential and significant radiation health hazard to the public, and * * * the protection of the public health, safety, and welfare * * * require[s] that every reasonable effort be made to provide for the stabilization, disposal, and control in a safe and environmentally sound manner of such tailings in order to prevent or minimize radon diffusion into the environment * * *.

42 U.S.C. 7901(a); see *American Mining Congress* v. *Thomas*, 772 F.2d 617 (10th Cir. 1985), *cert. denied*, 426 U.S. 1158 (1986). As to uranium mill tailings disposal sites in particular, UMTRCA gives the Department of Energy (DOE) the responsibility to clean up and dispose of certain sites (i.e., Title I), and gives NRC the responsibility for regulating those sites that are owned and operated by its licensees (i.e., Title II). EPA is responsible for promulgating the generally applicable environmental standards to be implemented by both NRC and DOE. 42 U.S.C. 2022(a), 7911–7924; *AMC*, 724 F.2d at 621. EPA published its final UMTRCA regulations on December 15, 1982 for Title I sites and on September 30, 1983 for Title II sites. 48 FR 590 and 48 FR 45926 (codified at 40 CFR part 192).

Parts of EPA's final UMTRCA regulations are directed to the permanent disposal of uranium mill tailings. See 40 CFR part 192, subpart D. Among the requirements of subpart D is the mandate that radon releases from the disposal sites not exceed a flux of 20 pCi/m^2-s. 40 CFR 192.32 (a) and (b). Other aspects of subpart D pertain to groundwater, monitoring, design, and duration of closure. See 40 CFR 192.32 and 192.33. With the exception of the groundwater provisions at 40 CFR 192.20(a)(2)–(3), applicable to Title I sites, all aspects of EPA's regulations were upheld by the Tenth Circuit in *AMC* v. *Thomas*. 772 F.2d at 640. EPA is currently engaged in rulemaking to address the court's remand of the Title I groundwater provisions.

Because NRC implements EPA's general UMTRCA standards for its licensees (as do its Agreement States), it has promulgated its own implementing regulations in the form of "criteria." *See generally* 10 CFR part 40, appendix A. While these criteria set forth a variety of specific requirements—financial, technical, and administrative—to govern the final reclamation (i.e., closure) design for each disposal site, they also provide for "site-specific" flexibility by authorizing alternatives that are at least as stringent as EPA's general standards and NRC's criteria, "to the extent practicable" as provided in section 84c of the Atomic Energy Act of 1954, as amended. 10 CFR part 40, appendix A, Introduction.

Overall, NRC's implementation criteria set forth a rigorous program governing the reclamation of the disposal sites so that closure will (1) last for 1,000 years to the extent reasonable, but in any event at least 200 years, and (2) limit radon release to 20 pCi/m^2-s throughout that period. The design must be able to withstand extreme weather and other natural forces. Upon review, EPA believed the NRC criteria comprise a comprehensive response to EPA's general standards at 40 CFR part 192, subpart D. However, as noted above, nothing in either EPA's 1983 general standards or NRC's 1985 amended

implementing criteria compelled sites to proceed towards final closure by a certain date. This was the reason for EPA's decision in 1989 to promulgate the subpart T NESHAPs under the CAA. Moreover, neither EPA's general UMTRCA regulations, nor NRC's implementing criteria previously required appropriate monitoring to ensure compliance with the 20 pCi/m^2-s standard.

B. Clean Air Act Amendments of 1990: Section 112(d)(9) ("Simpson Amendment")

The purpose of this provision is to preserve governmental resources and avoid needless, burdensome, and potentially contradictory CAA regulations. Specifically, section 112(d)(9) makes explicit that EPA need not regulate radionuclides under section 112 of the CAA for those radionuclide sources that are sufficiently regulated by NRC or its Agreement States (under the Atomic Energy Act or its component Acts, such as UMTRCA). More particularly, section 112(d)(9) allows EPA to decline to regulate under section 112 if the Administrator determines "by rule, and after consultation with the [NRC]," that NRC's regulatory program for a particular source "category or subcategory provides an ample margin of safety to protect the public health."

As EPA interprets section 112(d)(9), the Agency may rescind the subpart T NESHAP as it applies to non-operational uranium mill tailings disposal facilities licensed by NRC or an affected Agreement State *if* the Agency (1) consults with NRC, (2) engages in public notice and comment rulemaking, and (3) finds that the separate NRC regulatory program provides an equivalent level of public health protection (i.e., an ample margin of safety) as would implementation of subpart T. While this rulemaking may commence prior to final development of NRC's regulatory program, that program *must* fully satisfy the statute at the time EPA takes final action. In so doing, EPA must find that the NRC regulatory program satisfies the CAA standard, not that full and final implementation of that program has already successfully occurred.

C. Memorandum of Understanding (MOU)

EPA, NRC and the affected Agreement States entered intensive discussions resulting in the execution of a Memorandum of Understanding (MOU), a copy of which was printed at the end of the proposed rule to rescind subpart T published December 31, 1991 (56 FR 67568). The primary purpose of the MOU is to ensure that non-operational uranium mill tailings piles and impoundments licensed by NRC or an affected Agreement State achieve compliance through emplacement of a permanent radon barrier with the 20 pCi/m^2-s flux standard specified in EPA's UMTRCA standards (40 CFR 192.32(b)(1)) as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). The goal is that this occur at all current disposal sites by the end of 1997, or within seven years of when the existing operating and standby sites enter disposal status. The MOU called for EPA to modify its UMTRCA regulations (at 40 CFR part 192, subpart D) to address the timing concern that resulted in EPA's 1989 decision to promulgate subpart T. In addition, the MOU called for NRC to modify its implementing regulations at 10 CFR part 40, appendix A, as appropriate, and to immediately commence efforts to amend the licenses of the non-operational mill tailings disposal site owners and operators to include reclamation plans that require compliance with the 20 pCi/m^2-s standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). This was to be accomplished either through voluntary cooperation with the licensees, or through administratively enforceable orders. In accordance with the MOU, the NRC and affected Agreement States agreed to amend the licenses of all sites whose milling operations have ceased and whose tailings piles remain partially or totally uncovered. The amended licenses would require each mill operator to establish a detailed tailings closure plan for radon to include key closure milestones and a schedule for timely emplacement of a permanent radon barrier on all non-operational tailings impoundments to ensure that radon emissions do not exceed a flux of 20 pCi/m^2-s. These actions, coupled with NRC's commitment to enforce the amended licenses, are intended to provide the basis for EPA to make the requisite findings under CAA section 112(d)(9) for rescission of subpart T.

D. Settlement Agreement

In light of CAA section 112(d)(9), and in order to foster a consensus approach to regulation in this area, EPA then commenced discussions with NRC, the American Mining Congress (AMC), and the Environmental Defense Fund (EDF). As a result of discussions after execution of the MOU, a final settlement agreement was executed between EPA, AMC, EDF, NRDC and individual site owners, to which NRC agreed in principle by letter. The settlement agreement continues the regulatory approach set forth in the MOU adding extensive detail to that agreement.

Under the agreement between EDF, AMC, individual sites and EPA, the pending litigation would not be dismissed until after certain terms in the agreement were fulfilled. The parties agreed that upon rescission of subpart T, they would jointly move the court to dismiss the challenges pertaining solely to subpart T. (Paragraph III.1.) By the terms of the agreement (paragraph III.15.), AMC's pending administrative petition for reconsideration of subpart T becomes moot with the final rescission of subpart T. Moreover, the agreement does not legally bind or otherwise restrict EPA's rights or obligations under law; rather, by its terms (paragraph III.12.), there is no recourse for a court order to implement the agreement. Indeed, the only remedy for failure to meet the terms of the final agreement is activation by the litigants of the underlying litigation.

E. Actions by NRC and EPA Pursuant to the MOU and Settlement Agreement

1. EPA Regulatory Actions

On December 31, 1991, EPA took several steps towards fulfilling its responsibilities under the MOU and in implementing CAA section 112(d)(9) by publishing three Federal Register (FR) notices. In the first notice (56 FR 67537), EPA published a Final Rule to stay the effectiveness of 40 CFR part 61, subpart T, as it applies to owners and operators of non-operational uranium mill tailings disposal sites licensed by the NRC or an Agreement State. The stay will remain in effect until the Agency rescinds the uranium mill tailings NESHAPs at 40 CFR part 61, subpart T. However, if EPA fails to complete that rulemaking by June 30, 1994, the stay will expire and the requirements of subpart T will become effective.

In a second notice published on December 31, 1991, the Agency proposed to rescind the NESHAPs for radionuclides that appears at 40 CFR part 61, subpart T, as it applies to non-operational uranium mill tailings disposal sites licensed by the NRC or an Agreement State (56 FR 67561).

In the third notice, EPA published an advanced notice of proposed rulemaking to amend 40 CFR part 192, subpart D (56 FR 67569) to provide for site closure to occur as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee), and appropriate

monitoring requirements for non-operational uranium mill tailings piles. These amendments would ensure timely compliance and add monitoring requirements currently lacking in the UMTRCA regulations.

EPA published a notice on June 8, 1993, proposing to amend 40 CFR part 192, subpart D. (58 FR 32174). On November 15, 1993, EPA published the Final Rule amending 40 CFR part 192, subpart D. (58 FR 60340). This Final Rule requires: (1) Emplacement of a permanent radon barrier constructed to achieve compliance with, including attainment of, the 20 pCi/m^2-s flux standard by all NRC or Agreement State licensed sites that, absent rescission, would be subject to subpart T; (2) interim milestones to assure appropriate progress in emplacing the permanent radon barrier; and (3) closure of the site closure as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee) after the impoundments cease operation. EPA announced a goal that this occur by December 31, 1997, for those non-operational uranium mill tailings piles listed in the MOU between EPA, NRC and affected Agreement States (at 56 FR 67568), or seven years after the date on which the impoundments cease operation for all other piles.

As intended by EPA, the phrase "as expeditiously as practicable considering technological feasibility," means as quickly as possible considering: (1) The physical characteristics of the tailings and sites; (2) the limits of available technology; (3) the need for consistency with mandatory requirements of other regulatory programs; and (4) factors beyond the control of the licensee. While this phrase does not preclude economic considerations to the extent provided by the phrase "available technology," it also does not contemplate utilization of a cost-benefit analysis in setting compliance schedules. The radon control compliance schedules are to be developed consistent with the targets set forth in the MOU as reasonably applied to the specific circumstances of each site.

EPA recognized that the UMTRCA regulatory scheme encompasses a design standard. EPA made minor amendments to this scheme to better facilitate implementation of the regulation without fundamentally altering the current method of compliance. Subpart D, as amended, requires site control be carried out in accordance with a written tailings closure plan (radon), and in a manner which ensures that closure activities are initiated as expeditiously as practicable considering technological feasibility (including factors beyond the control of licensees). The tailings closure plan (radon), either as originally written or subsequently amended, will be incorporated into the individual site licenses, including provisions for and amendments to the milestones for control, after NRC or an affected Agreement State finds that the schedule reflects compliance as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). The compliance schedules are to be developed consistent with the targets set forth in the MOU as reasonably applied to the specific circumstances of each site with a goal that final closure occur by December 31, 1997, for those non-operational uranium mill tailings piles listed in the MOU between EPA, NRC and affected Agreement States (at 56 FR 67568), or seven years after the date on which the impoundments cease operation for all other piles. These schedules must include key closure milestones and other milestones which are reasonably determined to promote timely compliance with the 20 pCi/m^2-s flux standard. Milestones which are not reasonably determined to advance timely compliance with the radon air emissions standard, e.g. installation of erosion protection and groundwater corrective actions, are not relevant to the tailings closure plans (radon). In addition, subpart D requires that licensees ensure that radon closure milestone activities, such as wind blown tailings retrieval and placement on the pile, interim stabilization (including dewatering or the removal of freestanding liquids and recontouring), and radon barrier construction, are undertaken to achieve compliance with, including attainment of, the 20 pCi/m^2-s flux standard as expeditiously as practicable considering technological feasibility.

The goal of the amendments to subpart D is for existing sites, or those that become non-operational in the future, to achieve compliance as expeditiously as practicable considering technological feasibility (including factors beyond the control of licensees) within the time periods set forth in the MOU, including Attachment A thereto, and for new sites to achieve compliance no later than seven years after becoming non-operational.

However, if the NRC or an Agreement State makes a finding that compliance with the 20 pCi/m^2-s flux standard has been demonstrated through appropriate monitoring, after providing an opportunity for public participation, then the performance of the milestone(s) may be extended. If an extension is granted, then during the period of the extension, compliance with the 20 pCi/m^2-s flux standard must be demonstrated each year. Additionally, licensees may request, based upon cost, that the final compliance date for emplacement of the permanent radon barrier, or relevant milestone set forth in the applicable license or incorporated in the tailings closure plan (radon), be extended. The NRC or an affected Agreement State may approve such a request if it finds, after providing the opportunity for public participation, that: (1) The licensee is making good faith efforts to emplace a permanent radon barrier constructed to achieve the 20 pCi/m^2-s flux standard; (2) such delay is consistent with the definition of "available technology;" and (3) such delay will not result in radon emissions that are determined to result in significant incremental risk to the public health. Such a finding should be accompanied by new deadlines which reasonably correspond to the target dates identified in Attachment A of the MOU. (56 FR 67569).

EPA expects the NRC and Agreement States to act consistently with their commitment in the MOU and provide for public notice and comment on proposals or requests to (1) incorporate radon tailings closure plans or other schedules for effecting emplacement of a permanent radon barrier into licenses and (2) amend the radon tailings closure schedules as necessary or appropriate for reasons of technological feasibility (including factors beyond the control of the licensees). Under the terms of the MOU, NRC should do so with notice timely published in the **Federal Register**. In addition, consistent with the MOU, members of the public may request NRC action on these matters pursuant to 10 CFR 2.206. EPA also expects the Agreement States to provide comparable opportunities for public participation pursuant to their existing authorities and procedures.

The UMTRCA regulations, as promulgated by EPA and implemented by NRC prior to the 1993 amendments, while ultimately limiting emissions to the same numerical level as subpart T, were supported by a variety of design-based substantive and procedural requirements that speak to UMTRCA's unique concern that final site closure occur in a manner that will last 1,000 years or at least 200 years, but did not require monitoring of emissions to confirm the performance of the earthen cover. See generally 10 CFR part 40, appendix A and 40 CFR part 192. Subpart D, as amended, requires all

appropriate monitoring be conducted pursuant to the procedures described in 40 CFR part 61, appendix B, Method 115, or any other measurement method proposed by a licensee and approved by NRC or the affected Agreement State as being at least as effective as EPA Method 115 in demonstrating the effectiveness of the permanent radon barrier in achieving compliance with the 20 pCi/m²-s flux standard. After emplacement of a permanent radon barrier designed and constructed to achieve compliance with, including attainment of, the 20 pCi/m²-s flux standard, the licensee shall conduct appropriate monitoring and analysis of the radon flux through the barrier. This monitoring will verify that the design of the permanent radon barrier is effective in ensuring that emissions of radon-222 will not exceed compliance with the 20 pCi/m²-s flux standard, as contemplated by 40 CFR 192.32(b)(1)(ii). EPA intends that the permanent radon barrier be designed to ensure sustained compliance with the 20 pCi/m²-s flux standard by all sites, but does not require continuous emissions monitoring. Rather, a single monitoring event may suffice to verify the design of the permanent radon barrier to ensure continued compliance. Note, however, that if the NRC or an Agreement State extends the time for performance of milestones based on a finding that compliance with the 20 pCi/m²-s flux standard has been demonstrated by appropriate monitoring, compliance with the 20 pCi/m²-s flux standard must be demonstrated each year during the period of the extension.

2. NRC Regulatory Action

On May 20, 1994, the Commissioners approved final amendments conforming 10 CFR part 40, appendix A to 40 CFR part 192, subpart D. The final regulations adopted by NRC amend Criterion 6, add a new Criterion 6A and new definitions contained in the Introduction to appendix A. Criterion 6 was revised to provide for appropriate verification that the "final" (or "permanent" as defined by EPA) radon barrier, as designed and constructed, is effective in controlling releases of radon-222 to a level no greater than 20 pCi/m²-s when averaged over the entire pile or impoundment. Criterion 6(2) (59 FR 28220, June 1, 1994). The licensee must use EPA Method 115, or another method approved by the NRC as being at least as effective in demonstrating the effectiveness of the "final" radon barrier. *Id.* If the reclamation plan specifies phased emplacement of the "final" radon barrier, the verification must be performed on the portion of the pile or impoundment as the "final" radon barrier for that portion is emplaced. Additionally, certain reporting and recordkeeping is required in connection with the verification of the effectiveness of the "final" radon barrier. Criterion 6(4) (59 FR 28220, June 1, 1994).

The Introduction section of appendix A to part 40 was amended by adding the following definitions: as expeditiously as practicable considering technological feasibility, available technology, factors beyond the control of the licensee, final radon barrier, milestone, operation and reclamation plan. While supbart D requires emplacement of the "permanent" radon barrier, NRC requires emplacement of the "final" radon barrier. According to NRC, the definition of final radon barrier, is intended to "facilitate the drafting of clear regulatory text and to eliminate any ambiguity with respect to compliance with the 20 pCi/m²-s 'flux standard' after completion of the final earthen barrier and not as a result of any temporary conditions or interim measures." (59 FR 28222, June 1, 1994). The final definitions of factors beyond the control of the licensee and available technology have been revised to include a list of possible factors and examples of grossly excessive costs respectively, consistent with subpart D.

Criterion 6A paragraph 1 requires completion of the "final" radon barrier as expeditiously as practicable considering technological feasibility after a pile or impoundment containing uranium byproduct materials ceases operation, and requires it to be done in accordance with a written Commission-approved reclamation plan. In addition, this paragraph requires inclusion of specified interim milestones as a condition of the individual site license. Criterion 6A also specifies the conditions for Commission approval of extensions for performance of milestones and continued acceptance of uranium byproduct and other materials in the pile or impoundment. 10 CFR part 40, appendix A Criterion 6A (2) and (3) (59 FR 28220, June 1, 1994). These provisions vary somewhat from NRC's proposal, to reflect changes made in EPA's final amendments to subpart D at §§ 192.32(a)(3) (iv) and (v). The changes are "(1) that only byproduct material, not 'similar' material, will be approved for continued disposal after the final radon barrier is essentially complete and the verification of radon flux levels has been made, and (2) that public participation is specifically to be provided for only in the case of continued disposal after radon flux verification, in addition to general clarification of the paragraph." (59 FR 28224, June 1, 1994).

Additionally, NRC's final regulations in Criterion 6A provide for public participation consistent with the MOU and the settlement agreement. Such public participation will be provided through a notice published in the **Federal Register** including the opportunity for public comment on the proposed license amendment and the opportunity to request an informal hearing in accordance with the Commission's regulations at 10 CFR part 2, subpart L. The final regulations contain various revisions to NRC's proposal, both substantive and editorial in nature, primarily for consistency with EPA's final amendments to subpart D.

EPA believes the final revisions clarify NRC's proposal. EPA further believes that although NRC's conforming regulations are not identical to subpart D, the differences are minor in nature, and properly reflect application of the subpart D requirements to NRC's separate regulatory program. NRC's final rule appropriately conforms its regulations to 40 CFR part 192 subpart D. EPA notes that NRC's conforming amendments are an important consideration in EPA's determination that the NRC regulatory program protects the public health with an ample margin of safety.

3. Amendment of NRC and Agreement State Licenses

Consistent with their commitments under the MOU, as well as EPA's previous proposal to rescind subpart T (56 FR 67561 December 31, 1991), NRC and the affected Agreement States agreed to amend the licenses of all non-operational uranium mill tailings sites to ensure inclusion of schedules for emplacing a permanent radon barrier on the tailings impoundments, as well as interim milestones (e.g., wind blown tailings retrieval and placement on the pile, and interim stabilization). To this end, NRC and the Agreement States requested the licensees to voluntarily seek amended licenses and have completed processing those requests. NRC has continued the spirit of cooperation between EPA and NRC by keeping the Agency apprised of the status of the approval of reclamation plans and amendment of licenses.

As of September 30, 1993, NRC and the Agreement States had completed all license amendments for closure of licensed non-operational impoundments, with the exception of the license amendment incorporating the reclamation plan for the Atlas site located in Moab, Utah.

NRC informed EPA by letter that the Commission received extensive comments on NRC's July 20, 1993 proposal to approve the Atlas reclamation plan, including the closure schedule and interim milestones required by the MOU, and the Environmental Assessment and the Finding of No Significant Impact for the Atlas mill. NRC rescinded its Finding of No Significant Impact for the Atlas mill in October 1993. (58 FR 52516, October 8, 1993). One issue appears to be the potential for flooding of the Atlas impoundment if it is reclaimed on-site, due to the proximity of the site to the Colorado River. This concern and others appear to have caused delays in the license amendment for this site. NRC is actively pursuing a timely final decision on the acceptability of the existing Atlas site and its reclamation plan. To this end, NRC informed EPA by letter dated December 28, 1993, that NRC has conducted several meetings with the various representatives enumerated above and has requested additional technical information from the licensee. On March 30, 1994, NRC published a Notice of Intent to Prepare an Environmental Impact Statement and to Conduct a Scoping Process. (59 FR 14912). In that notice, NRC states its determination "that approval of the revised reclamation plan constitutes a major Federal action and that based on the level of controversy related to the proposed action [on-site reclamation] and uncertainties associated with the unique features of the Moab site, preparation of an EIS in accordance with the National Environmental Policy Act (NEPA) and the NRC's implementing requirements in 10 CFR part 51 is warranted." (59 FR 14913, March 30, 1994). The notice describes the proposed action, possible alternative approaches and the scoping process. The alternative approaches include moving the pile to one of two alternative sites. *Id.*

The near edge of the town of Moab is located about 2 km to the east of the Atlas tailings impoundment. However, it appears the area within a 1.5 km radius of the Atlas mill tailings impoundment site is sparsely populated. An interim cover is being placed over the impoundment for radon emission control as the Atlas tailings impoundment dries sufficiently to allow access of the necessary equipment. As discussed in the Background Information Document (BID) for the amendments to 40 CFR part 192 subpart D, interim covers significantly reduce radon emissions. Technical Support for Amending Standards for Management of Uranium Byproduct Materials: 40 CFR Part 192 Background Information Document, EPA 402–R–93–085, October 1993.

NRC announced on May 11, 1994 (59 FR 24490) that Atlas Corporation applied to amend condition 55 of its source material license. Atlas proposed to amend the milestone dates by extending the dates for windblown tailings retrieval and placement on the pile, placement of the interim cover and placement of the final radon barrier by one year. NRC has informed EPA that the Commission approved the extension of the date for placement of the interim cover to February 15, 1995 and that the milestone for emplacement of the "final" radon barrier was not extended. See Docket Entry A91–67 IV–D–50 (Letter from NRC to Atlas).

Since NRC will notice any proposed change in the milestone date for emplacement of the permanent radon barrier, EPA and others will have the opportunity to monitor such an extension at that time. Under the present circumstances, it appears an extension of the MOU target date of 1996 would be consistent with the factors to be considered under the "as expeditiously as practicable" standard at 40 CFR 192.32(a)(3)(i), since NRC has determined there is a need for consistency with mandatory requirements of the National Environmental Policy Act (NEPA) and there may be factors beyond the control of the licensee. 40 CFR 192.31(k). Based on representations from NRC, EPA believes that the extra time NRC is taking to further review the proposed Atlas mill site reclamation plan is necessary to address the large amount of public comments received and that it will result in a final solution that is more responsive to public comment.

NRC and the affected Agreement States have also agreed to enforce the provisions of the amended licenses to ensure compliance with the new schedules for emplacing the permanent radon barriers, including interim milestones, and to ensure (and verify) the efficacy of the design and construction of the barrier to achieve compliance with the 20 pCi/m^2-s flux standard contained in the amendments to subpart D. (56 FR 67568, December 31, 1991) (MOU, a copy of which was printed at the end of the proposed rule to rescind subpart T).

III. Final Rule to Rescind 40 CFR Part 61, Subpart T for NRC and Agreement State Licensees

EPA is rescinding subpart T as it applies to non-operational uranium mill tailings disposal sites licensed by NRC or an affected Agreement State. The Agency sets forth this Final Rule pursuant to its authority under section 112(d)(9) of the CAA, as amended in 1990. The support for this action includes (1) the MOU, which reflects consultation with NRC and the affected Agreement States and sets forth a course of conduct to bolster NRC's regulatory program under UMTRCA so that it is protective of public health with an ample margin of safety, (2) the settlement agreement which adds comprehensive detail to the MOU, (3) EPA's amendments to 40 CFR part 192, subpart D, (4) the relevant NRC and Agreement State actions concerning license amendments, to date, and (5) NRC's amendments to its implementation regulations at appendix A, 10 CFR part 40.

A. EPA Determination Under CAA Section 112(d)(9)

1. Background

Section 112(d)(9) authorizes EPA to decline to regulate radionuclide emissions from NRC-licensees under the CAA provided that EPA determines, by rule, and after consultation with NRC, that the regulatory scheme established by NRC protects the public health with an ample margin of safety. The legislative history of section 112(d)(9) provides additional guidance as to what is meant by "an ample margin of safety to protect the public health" and what process the Administrator should follow in making that determination in a rulemaking proceeding under section 112(d)(9). The Conference Report accompanying S. 1630 points out that the "ample margin of safety" finding under section 112(d)(9) is the same "ample margin of safety" requirement that was contained in section 112 of the CAA prior to its amendment in 1990. The conferees also made clear that the process the Administrator was expected to follow in making any such determination under section 112(d)(9) was that "required under the decision of the U.S. Court of Appeals in *NRDC* v. *EPA*, 824 F.2d 1146 (D.C. Cir 1987) (*Vinyl Chloride*)." H. Rep. No. 101–952, 101st Cong., 2d Sess. 339 (1990), reprinted in 1 A Legislative History of the Clean Air Act Amendments of 1990, at 1789 (1993) (hereinafter "Legislative History CAAA90").

EPA has already made a determination in promulgating subpart T that compliance with the 20 pCi/m^2-s flux standard protects public health with an ample margin of safety. EPA conducted a risk analysis in promulgating subpart T in 1989. At that time, EPA determined that the 20 pCi/

m^2-s flux standard was a "baseline" that was provided by EPA's general UMTRCA standards at 40 CFR part 192, subpart D. EPA further determined that compliance with that baseline would be protective of public health with an ample margin of safety. EPA promulgated subpart T to ensure achievement of the flux standard at non-operational sites in a timely manner. In conducting this rescission rulemaking, EPA is *not* revisiting either the risk analysis or decision methodology that supported the promulgation of subpart T; rather, EPA is only visiting whether NRC's regulatory program under UMTRCA will result in meeting the 20 pCi/m^2-s flux standard established in subpart T as being the level that provides an ample margin of safety, with compliance achieved in a timely manner thereby rendering subpart T unnecessarily duplicative.

EPA's determination that the NRC regulatory program protects public health with an ample margin of safety includes a finding that NRC and the affected Agreement States are implementing and enforcing, in significant part on a programmatic and site-specific basis: (1) The regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC consistent with the settlement agreement described above and (2) the license (i.e., tailings closure plan) requirements that establish milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m^2-s flux standard.

2. EPA's UMTRCA Standards

As discussed above, EPA has modified its UMTRCA regulations (40 CFR part 192 subpart D) to require compliance with the 20 pCi/m^2-s flux standard as expeditiously as practicable considering technological feasibility (and factors beyond the control of the licensee), and to require appropriate monitoring to verify the efficacy of the design of the permanent radon barrier. By definition, no more rapid compliance can occur, as a practical matter, because this schedule represents the earliest that the sites could be closed when all factors are considered. EPA expects that these compliance schedules were developed and will be modified consistent with the targets set forth in the MOU as reasonably applied to the specific circumstances of each site. When EPA promulgated subpart T it recognized that many sources might not be able to comply with the two year compliance date then required pursuant to section 112. Based on this, subpart T includes a provision that in such a case EPA would "establish a compliance agreement which will assure that disposal will be completed as quickly as possible." 40 CFR 61.222(b). The time period required for closure under subpart D embodies the same approach. In practice, therefore, both subpart T and subpart D establish the same basic timeframes for achievement of the flux standard. Assuming NRC and the Agreement States faithfully implement subpart D and the license amendments required under subpart D, EPA would not expect there to be any significant difference between these two programs in the amount of time required for sites to comply with the flux standard.

As discussed above, subpart D as amended, provides that NRC may grant an extension of time to comply with either of the following deadlines: (1) Performance of milestones based upon a finding that compliance with the 20 pCi/m^2-s flux standard has been met or (2) final compliance beyond the date or relevant milestone based upon cost. EPA considers these two bases upon which NRC may grant an extension to be mutually exclusive, i.e., a request for a specific extension may be based on one or the other but not both grounds. If a milestone is being extended for a basis other than cost, such an extension may be granted if NRC finds that compliance with the 20 pCi/m^2-s flux standard has been demonstrated using EPA Method 115 or an NRC approved alternative. In addition the site must continue to demonstrate compliance with this flux standard on an annual basis. However, if a licensee requests extension of the final compliance date (or relevant milestone) based upon cost, such an extension may only be granted if NRC finds that the three criteria specified in 40 CFR section 192.32(a)(3)(iii) are met. Any extensions of the final compliance date based upon cost will by the nature of the criteria be granted on a site-specific basis.

If a licensee requests an extension of the final compliance date based upon cost, technology may not be used as a basis for granting the extension unless the costs are grossly excessive, as measured by normal practice within the industry. EPA recognizes that the emissions from the pile may exceed the 20 pCi/m^2-s flux standard pending final compliance, but believes these increases will be minimal and of limited duration. EPA does not anticipate the short extensions in the time to complete the radon barrier contemplated in subpart D and the NRC conforming amendments to increase the maximum lifetime individual risk beyond 1 in 10,000, the level which EPA found presumptively safe under the benzene policy, and for this category, protective of the public health with an ample margin of safety in promulgating subpart T. 54 FR 51656 (December 15, 1989). EPA believes that during the short extensions, this is consistent with the reality of short-term risks from radon emissions during the period of delay, and consistent with the risks associated with negotiated compliance agreements when non-operational sites fail to close within the two-year period required by subpart T. EPA believes these emissions should not exceed those emissions which could occur under subpart T if compliance agreements had been negotiated. Extensions based upon cost will only be granted if NRC or an Agreement State finds, after providing an opportunity for public participation, that the emissions caused by the delay will not cause significant incremental risk to the public health. Additionally, a site requesting an extension based upon cost must demonstrate that it is making a good faith effort to emplace the permanent radon barrier. In many situations, where an interim cover is in place, radon emissions are significantly reduced and tailings which are wet or ponded emit no significant levels of radon. If NRC or an Agreement State uses this flexibility, public notice is required, and as appropriate, EPA would be aware of its use and could also monitor extensions under the provisions of § 61.226(c) to determine whether the Agency should reconsider the rescission and seek reinstatement of subpart T, on either a programmatic or site-specific basis. Thus, under the circumstances, EPA believes affording authority for extensions of the final compliance date based upon cost is not inconsistent with protecting the public health.

Additionally, NRC or an Agreement State may extend the date for emplacement of the radon barrier based on "factors beyond the control of the licensee," as that term is implicit in the definition of "as expeditiously as practicable." EPA understands that under subpart D's provisions there is no bar to NRC or an Agreement State reconsidering a prior decision establishing a date for emplacement of the radon barrier that meets the standard of "as expeditiously as practicable considering technological feasibility." Such reconsideration could, for example, be based on the existence of factors beyond the control of the licensee, or on a change in any of the various factors that must be considered in establishing a date that meets the "as expeditiously as practicable" standard of § 192.32(a)(3)(i). However, EPA stresses that such a change in

circumstances would not automatically lead to an extension. It would be incumbent on NRC or an Agreement State to evaluate all the factors relevant under § 192.32(a)(3)(i) before it changed a previously established milestone or date for emplacement of the final barrier, and any new date would have to meet the standard set out in § 192.32(a)(3)(i). Finally, NRC's and Agreement States' authority to reconsider previously established milestones or dates would include authority to shorten or speed up such dates, as well as extend them. EPA also expects that public participation consistent with that level of participation provided in the MOU and the settlement agreement will be afforded the public by NRC or an Agreement State in amending a license due to "factors beyond the control of the licensee," or for any other basis.

3. NRC's Conforming Regulations

As discussed previously, the Commission has approved final regulations to conform appendix A of 10 CFR part 40 to EPA's general standards promulgated under UMTRCA. (59 FR 28220, June 1, 1994.) EPA is today making a determination that NRC's final regulations support rescission. EPA believes NRC's final regulations adequately and appropriately implement EPA's amendments to 40 CFR part 192, subpart D. This determination is supported by the comments received in response to EPA's supplemental proposal to rescind subpart T. (59 FR 5674, February 7, 1994.) All commenters agreed that NRC's proposed conforming regulations support EPA's proposal to rescind subpart T by either adequately and appropriately implementing subpart D, or may reasonably be expected to do so when finalized.

4. License Amendments

Table 1 illustrates that all NRC and affected Agreement State licenses, except one, have been modified pursuant to the MOU. Attachment A to the MOU, developed in conjunction with each site and considering the particular circumstances of that site, lists target dates for emplacement of the permanent radon barrier with "a guiding objective that this occur to all current disposal sites by the end of 1997, and within seven years of when the existing operating and standby sites cease operation." 56 FR 67568 (December 31, 1991). The MOU requires NRC and the Agreement States to "ensure * * * that cover emplacement on the tailings impoundments occurs as expeditiously as practicable considering both short-term reductions in radon releases and long-term stability of the uranium mill tailings." *Id.* Under the MOU, the compliance schedules (i.e., tailings closure plans (radon) under subpart D, as amended) were to be developed consistent with the MOU targets as reasonably applied to the specific circumstances of each site, with a goal that final closure occur by December 31, 1997, for those non-operational uranium mill tailings piles listed in the MOU. EPA believes the NRC and the Agreement States have acted in good faith to implement their commitments under the MOU by amending the site licenses. EPA also believes that uranium mill tailings disposal site owners and operators have acted in good faith by voluntarily requesting the license amendments. The license amendments by NRC and the affected Agreement States appear to reflect closure as expeditiously as practicable under the terms of the MOU and the requirements of subpart D as amended, thus supporting rescission of subpart T and a determination that the NRC program protects public health with an ample margin of safety. See Docket Entry A91–67 IV–D–46 (NRC Comments in Response to EPA's February 7, 1994 Proposal); Docket Entry A91–67 II–D–23 (February 7, 1994, Note to Docket from Gale Bonanno, Office of Radiation and Indoor Air, Criteria and Standards Division detailing approval of NRC licenses and milestone schedules); Docket Entry A91–67 II–D–45 (June 1, 1994, Note to Docket from Gale Bonanno, Office of Radiation and Indoor Air, Criteria and Standards Division detailing approval of Agreement State licenses and milestone schedules); Docket Entry A91–67 IV–D–52 (June 13, 1994, Letter to Gail Bonanno from State of Washington); Docket Entry A91–67 IV–D–49 (Letter to Gail Bonnano [sic] providing information for Washington State licensees, Dawn Mining Company and Western Nuclear, Inc.). In addition, consistent with their commitments under the MOU, NRC and the affected Agreement States are providing opportunities for public participation in the license amendment process.

TABLE 1.—STATUS OF RECLAMATION PLANS FOR NON-OPERATIONAL URANIUM MILL TAILINGS IMPOUNDMENTS [1]

Facility	Approval date for reclamation plan	Approval date for reclamation milestones	MOU date for final radon cover	License date for final radon cover
ANC, Gas Hills, WY	4/10/83	11/5/92	1995	12/31/94 [2] 6/30/96
ARCO Coal, Bluewater, New Mexico	1/30/92	11/9/92	1995	12/28/94
Atlas, Moab, Utah	[3]	11/4/92	1996	12/31/96
Conoco, Conquista, Texas	9/8/93	9/8/93	1996	12/31/93
Ford-Dawn Mining, Ford, WA	9/30/93	9/30/93	2010	[4] 12/31/18
Hecla Mining, Duria, CO	9/30/93	9/30/93	1997	12/31/95
Homestake, Milan, NM	7/23/93	11/9/92	[5] 1996/2001	[5] 12/31/01
Pathfinder-Lucky Mc, Gas Hills, Wyoming	9/17/93	12/29/92	1998	9/30/98
Petrotomics, Shirley Basin, WY	10/23/89	1/21/93	1995	12/31/95
Quivira, Ambrosia Lake, NM	10/5/90	1/22/93	1997	[7] 12/31/97
Rio Algom, Lisbon, UT	9/29/93	12/31/96	1996	12/31/96
Sohio L-Bar, Cebolleta, New Mexico	5/1/89	11/4/92	1992	12/31/92
UMETCO, Gas Hills, Wyoming	[8]	12/2/92	1995	12/31/95
UMETCO, Maybell, CO	7/30/93	7/30/93	1997	12/31/97
UMETCO, Uravan, CO	12/31/87	12/31/87	[6] 2002	12/31/96
UNC, Church Rock, NM	3/11/92	10/29/92	1997	12/31/97
Union Pacific, Bear Creek, Wyoming	4/3/92	11/5/92	1996	12/31/96
WNI, Sherwood, WA	9/30/93	9/30/93	1996	[4] 1/31/98

TABLE 1.—STATUS OF RECLAMATION PLANS FOR NON-OPERATIONAL URANIUM MILL TAILINGS IMPOUNDMENTS [1]—Continued

Facility	Approval date for reclamation plan	Approval date for reclamation milestones	MOU date for final radon cover	License date for final radon cover
WNI, Split Rock, WY	6/17/93	11/5/92	1995	12/31/94

[1] NRC and the affected Agreement States committed to complete review and approval of reclamation plants, including schedules for emplacement of earthen covers on non-operational tailings impoundments by September 30, 1993.
[2] Two impoundments: 1996 date is for impoundment which was accepting waste from off-site for disposal. Licensee has requested an amendment for a one year extension of dates for placement of radon barrier on the two piles.
[3] Delayed pending resolution of issues raised in response to *Federal Register* notice dated July 20, 1993.
[4] Closure date change is because of groundwater remediation schedule.
[5] Two impoundments: large impoundment to be completed by 1996, small impoundment by 2001 except for areas covered by evaporation ponds. Final radon barrier placement over the remainder of the small impoundment shall be completed within two years of completion of groundwater corrective actions.
[6] Date in the MOU is for final reclamation.
[7] Two impoundments: final radon barrier placement on both by December 31, 1997. One active cell.
[8] Various early 1980s.

The license amendments noted in Table 1 reflect consistent application of the dates contained in the MOU. Three exceptions are worth noting. First, although the license amendment to incorporate the reclamation plan for the Atlas site is not complete, EPA is confident that NRC is actively pursuing final resolution of the pending reclamation plan. In the notice announcing its intent to prepare an environmental impact statement, NRC published a tentative schedule to: prepare a draft EIS and issue for public comment in October 1994; provide a 45 day comment period; and publish the final EIS in April 1995. (59 FR 14914, March 30, 1994). Pending final approval of a reclamation plan, the Atlas site is continuing to emplace an interim cover on the pile to control radon emissions, and recently received approval to extend the date for placement of the interim cover to February 15, 1995. The date for placement of the "final" radon barrier was not extended by NRC and remains December 31, 1996. See Docket Entry A91–67 IV–E–5 (Note to Docket from Gale Bonanno, Office of Radiation and Indoor Air, Criteria and Standards Division, summary of telephone conversation with legal counsel to AMC); Docket Entry A91–67 IV–D–50 (Letter from NRC to Atlas).

Second, the license amendments for the ANC Gas Hills site address two separate impoundments. Consistent with the MOU, the license amendment for the non-operational impoundment contains a December 31, 1994, date for emplacement of the permanent radon barrier. On February 11, 1994, NRC published a notice of receipt of a request to amend the reclamation schedule at the ANC Gas Hills site. (59 FR 6658). ANC has requested a one-year extension of the current date for emplacement of the permanent radon barrier. ANC "believes [it] cannot begin authorized restoration activities in the time necessary to meet current reclamation milestone dates," due to an NRC communication "that a previous amendment request for a reclamation redesign proposal dated April 16, 1992, would not be reviewed by late 1992 or early 1993." *Id.* NRC notes that ANC is continuing to monitor and maintain the interim cover. Further, NRC states—

> Approval of the request will be based on determination there be no harm to human health or the environment, that reclamation will be completed as expeditiously as practical[sic], verification that rescheduling reclamation will not impact the final closure date for the entire facility.

Additionally, an impoundment previously designated as operational for in-situ waste disposal is now non-operational. Emplacement of the permanent radon barrier on this second impoundment is scheduled to be completed by June 30, 1996, well within the seven year goal of the MOU for impoundments which cease operations after December 31, 1991.

On May 9, 1994, ANC informed NRC by letter that it would be ceasing operations and going out of business by the end of May 1994. On May 13, 1994, NRC issued an Order and Demand for Information to ANC. See Docket Entry A91–67 IV–D–47. This Order requires ANC to continue complying with all applicable license conditions, including monitoring and reclamation activities. The Order further states "[D]iscontinuance of those programs and functions in the manner described by the Licensee in its letter of May 9, 1994, would constitute a willful violation of ANC's license." According to the Order, abandonment would constitute a "deliberate violation" of section 184 of the AEA of 1954, as amended, 10 CFR 40.41.(b), and 10 CFR 40.42. The Order further states that "such a deliberate act of abandonment would be a serious violation of the AEA * * * NRC regulations, and ANC's license," and could subject ANC and the individuals causing the violations to further enforcement actions and potential criminal sanctions. NRC also ordered that ANC submit additional information in order for NRC to determine "whether enforcement action should be taken to ensure compliance with NRC statutory and regulatory requirements."

EPA notes that the actions taken to date by NRC regarding this site indicate a good faith intention to implement the MOU and the requirements of subpart D and to respond quickly as the situation at the ANC Gas Hills site develops. EPA fully expects that NRC will take actions consistent with the Commission's enforcement policy and authority. See 10 CFR part 2, subpart B and appendix C. While difficult enforcement questions are raised about this site, EPA notes that the same questions would be raised if subpart T were not rescinded. Under the provisions of the rule adopted today, if future developments meet the criteria and conditions for reconsideration of rescission, the Agency expects it would receive a petition pursuant to § 61.226(b). EPA would then take action consistent with those provisions at that time. In any case, EPA reserves the right to initiate reconsideration if appropriate.

Lastly, the license amendment dates for two additional sites, the Ford-Dawn Mining site and the Western Nuclear, Inc. (WNI) site both located in the Agreement State of Washington, are also beyond the dates contained in the MOU. However, Washington State notes that for these sites the closure date was changed because of the groundwater remediation schedule, and the difficulty