Group C

FOIA/PA NO: 2014-0361

OFFICIAL RECORDS TO BE MADE PUBLICLY AVAILABLE IN ADAMS

FOIA/PA 2014-0361

GROUP C:

2 records to be released in their entirety and made publicly available:

ML051810697 (104 pages)
ML051810698 (190 pages)

-HIT_ID-
OGC 06-15-88
-SYSTEM-
KEY
-ISSUE_DT-
19880615
-TITLE-
NRC Brief Before the United States Court of Appeals for the Tenth Circuit Requesting Denial of Petitioners Demand for Judicial Review of an NRC Final Order Amending its Regulations Governing the Control and Disposal of Uranium and Thorium Mill Tailings
-SUBJECT-
Environmental Protection Agency (EPA) Standards/Regulations
-TOPICS-

-DOC_CAT-
GC
-ORDER-
24
-ID_NUM-
GC880615.EA
-DOCUMENT_ID-
OGC 880615
-PUBLIC-
P
-ISSUES-

-SIGN_NAME-
Briggs,W.H.
Slaggie,E.L.
Jensen,E.N.
-SIGN_AFFIL-
OGC
-ADDRESS_NAME-

-ADDRESS_AFFIL-

-RESPONDS_TO-

-COMPLETED_BY-

-SECY_REF-

-TEXT-
GC880615.EA

IN THE UNITED STATES COURT OF APPEALS
FOR THE TENTH CIRCUIT

No. 88-1040

AMERICAN MINING CONGRESS,

Petitioner,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION and the UNITED STATES OF AMERICA,

Respondents.

No. 88-1041

QUIVIRA MINING COMPANY, et al.,

Petitioners,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION and the UNITED STATES OF AMERICA,

Respondents.

BRIEF OF RESPONDENT UNITED STATES NUCLEAR REGULATORY COMMISSION

WILLIAM H. BRIGGS, JR.
Solicitor

E. LEO SLAGGIE
Deputy Solicitor

E. NEIL JENSEN
Attorney
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

June 15, 1988

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page

Cases

A. Judicial Decisions

* Statement in compliance with 10th Circuit Rule 28.2(b): This case is a related pending appeal.

Page

B. Statutes

Page

D. Federal Register Notices

Page

IN THE UNITED STATES COURT OF APPEALS
FOR THE TENTH CIRCUIT

ÄÄÄ)
)
AMERICAN MINING CONGRESS,)

)
Petitioner,)
)
v.)
)
) No. 88-1040
UNITED STATES NUCLEAR REGULATORY)
COMMISSION and the UNITED)
STATES OF AMERICA,)
)
Respondents.)
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ)
QUIVIRA MINING COMPANY,)
et al.,)
)
Petitioners,)
)
v.)

) No. 88-1041
UNITED STATES NUCLEAR REGULATORY)
COMMISSION and the UNITED)
STATES OF AMERICA,)
)
Respondents.)
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ)

BRIEF OF RESPONDENT
UNITED STATES NUCLEAR REGULATORY COMMISSION

STATEMENT OF THE ISSUE

Whether the Nuclear Regulatory Commission is required to perform a cost/benefit analysis before conforming its regulations for the management of uranium mill tailings to general standards promulgated by the Environmental Protection Agency, or otherwise to re-examine the appropriateness of those standards, where Congress gave the Commission an unconditional direction in

Sections 84a(2) and 275f(3) of the Atomic Energy Act to conform to the EPA standards.

STATEMENT OF JURISDICTION

Petitioners seek judicial review of a final order in a proceeding of the Nuclear Regulatory Commission ("NRC" or "Commission") for amending its regulations governing the control and disposal of uranium and thorium mill tailings. 52 Fed. Reg. 43553 (November 13, 1987). Jurisdiction to consider petitions for review of such final orders lies exclusively in United States Courts of Appeals. 42 U.S.C. 2239(b) and 28 U.S.C. 2342(4).

STATEMENT OF THE CASE

A. Nature Of The Case

In Section 84a(2) of the Atomic Energy Act ("AEA"), 42 U.S.C. 2114(a)(2), Congress mandated that the NRC "insure that [its] management of [mill tailings] is carried out in such manner as . . . conforms with applicable general standards promulgated by [the Environmental Protection Agency ("EPA")]." Similarly in Section 275f(3) of the AEA, 42 U.S.C. 2022(f)(3), Congress instructed that "after . . . [EPA] promulgates final standards . . . the Commission shall . . . amend [its] regulations, and adopt such modifications, as the Commission deems necessary to conform to such final standards of (EPA]." This case presents but a single question of statutory interpretation: whether these unambiguous mandates for the NRC to conform to EPA's general standards contain certain implicit-exceptions.

Petitioners contend that they do. Specifically, petitioners argue that despite the apparent clarity of the conformance mandate the NRC can and should reject an EPA standard: (1) if the NRC finds the standard to be too costly relative to the expected benefits; and (2) if the NRC finds that the standard is inappropriate because it derived from EPA regulations governing low-volume, high-toxicity chemical waste rather than high-volume, low-toxicity mining waste. Moreover, petitioners identify one particular standard which, they argue, must be rejected for both reasons: EPA's requirement for a "liner" for mill tailings impoundments, Criterion 5A of the NRC's final rule.

The language of the pertinent provisions of the Atomic Energy Act, however, reveals no such congressionally-sanctioned exceptions to NRC's Section 84a(2) and Section 275f(3)

conformance duty. Thus the Commission issued the amendments to its regulations at issue here without conducting a separate analysis of the costs of EPA's standards and without making a separate determination as to the appropriateness of EPA's standards for the regulation of uranium mill tailings because such duplicative undertakings would have been pointless in view of Congress's directive to the NRC to conform its regulations to EPA's general standards.

B. Statement Of The Facts

1. The Uranium Mill Tailings Radiation Control Act of 1978, As Amended

Congress established its program for the management and control of uranium and thorium mill tailings at active mill sites in Title 2 of the Uranium Mill Tailings Radiation Control Act of 1978 ("UMTRCA"), Pub.L. 95-604, 92 Stat. 3021, 42 U.S.C. 7901 et seg., amending Sections 83, 84, 161, 274 and 275 of the Atomic Energy Act. 1/ UMTRCA assigned EPA the responsibility for issuing general standards:

[tlhe Administrator shall, by rule, propose and within 11 months thereafter promulgate in final form, standards [of] general application for the protection of the public health, safety, and the environment from radiological and non-radiological hazards associated with the processing and with the possession, transfer, and disposal of [mill tailings].

Section 275b(1) 42 U.S.C. 2022(b)(1). EPA was instructed that its standards for nonradiological hazards

shall provide for the protection of human health and the environment consistent with the standards required under subtitle C of the Solid Waste Disposal Act, as amended. . . .

Section 275b(2), 42 U.S.C. 2022(b)(2).

Congress assigned responsibility to the NRC for the

overall management of the mill tailings control program, including

1/ All references to particular sections of the statute in this brief refer to sections of the Atomic Energy Act unless otherwise identified. The statutory history of UMTRCA and its amendments is set forth in greater detail in Respondents' Brief in Quivira v. NRC, No. 85-2853.

the duty to insure that its management of mill tailings "conforms with applicable general standards promulgated by [EPA] under Section 275." 2/ Section 84a(2), 42 U.S.C. 2114(a)(2). The Commission was also instructed to insure that its program:

(3) conforms to general requirements established by the Commission, with the concurrence of the Administrator, which are, to the maximum extent practicable, at least comparable to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulated by the Administrator under the Solid Waste Disposal Act, as amended.

Section 84a(3), 42 U.S.C. 2114(a)(3).

EPA was unable to meet the deadline set for its promulgation of standards in the 1978 UMTRCA. However, on October 3, 1980 the Commission promulgated the "Uranium Mill Licensing Requirements," 45 Fed. Reg. 65521 (October 3, 1980), codified at 10 C.F.R. Part 40 (1981) ("1980 Regulations") to implement its responsibilities under UMTRCA. 3/

In 1983 Congress amended the UMTRCA primarily to provide EPA with a new schedule. NRC Authorization Act For Fiscal Years

2/ NRC's responsibility to implement and enforce the EPA standards is specified in Section 275d:

Implementation and enforcement of the standards promulgated pursuant to subsection b. of this section shall be the responsibility of the Commission in the

conduct of its licensing activities under this Act.

42 U.S.C. 2022(d).

3/ These requirements included twelve criteria for limiting radioactive effluents from uranium and thorium mills and mill

(FOOTNOTE CONTINUED ON NEXT PAGE)

1982 and 1983, Pub.L. No. 97-415, 96 Stat. 2067 (January 4, 1983) ("1983 Amendments"). 4/ Congress made no change in its allocation of responsibilities between the EPA and the NRC. Rather, Congress explicitly addressed the situation created by the fact that the NRC had promulgated regulations prior to EPA's issuance of generate standards by adding Section 275f(3) to the statute to re-emphasize

(FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

tailings including criteria designed to control the seepage of toxic materials from tailings into the groundwater ("Appendix A criteria").

4/ In the 1983 Amendments, Congress inserted language in Section 275b(1) providing that EPA, in establishing general standards,

shall 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.

42 U.S.C. 2022 (b)(1). With respect to the NRC, different language was added to Section 84a(1) to include economic cost as a factor the Commission is to consider in its regulatory program:

The Commission shall insure that the management of [mill tailings] is carried out in such manner as --

(1) the Commission deems appropriate ... taking into account the risk to the public

health, safety, and the environment, with due_
consideration of the economic costs and such other
factors as the Commission determines to be appropriate.

42 U.S.C. 2114(a)(1) (amendment underlined). At the same time Congress added Section 84c to the statute to provide the NRC with the authority to accept licensee-proposed site-specific alternatives to the Commission's requirements which achieve a level of protection "equivalent to, to the extent practicable" the level achieved by NRC's requirements and EPA's standards. 42 U.S.C. 2114(c).

the responsibilities of the EPA to issue, and of the NRC to implement and enforce, general standards:

(3) Not later than 6 months after the date on which the Administrator promulgates final standards pursuant to subsection b of this section, the Commission shall, after notice and opportunity for public comment, amend the October 3 regulations, and adopt such modifications, as the Commission deems necessary to conform to such final standards of the Administrator.

Section 275f(3), 42 U.S.C. 2022(f)(3).

2. EPA's 1983 General Standards And Their Affirmance By This Court

EPA, pursuant to its authority under Section 275b, issued its general standards for the management of mill tailings on September 30, 1983. 48 Fed. Reg. 45926-45947 (October 7, 1983) (codified at 40 C.P.R. Part 192, Subparts D and E). With respect to groundwater protection, EPA did not promulgate regulations developed particularly for mill tailings but rather adopted certain of the standards it had earlier issued for hazardous wastes under Subtitle C of the Solid Waste Disposal Act. 5/

5/ The Solid Waste Disposal Act, 42 U.S.C. 6901-6987, was amended in its entirety by the Resources Conservation and Recovery Act of 1976 ("RCRA"), Pub.L. 94-580, Oct. 21, 1976, 90 Stat. 2795.

As relevant here, EPA issued regulations under SWDA for hazardous waste on July 26, 1982, 47 Fed. Reg. 32274-32388, codified at 40 C.P.R. Part 260 et seq.

Subtitle C of SWDA, "Hazardous Waste Management," requires EPA to identify particular hazardous wastes which shall be subject to-regulation under Subtitle C. Section 3001 of SWDA; 42 U.S.C. 6921. in 1980 Congress amended Section 3001 to exclude mining waste from regulation under Subtitle C of SWDA until such time as EPA had submitted a report to Congress concerning these wastes.

(FOOTNOTE CONTINUED ON NEXT PAGE)

Among other things EPA's primary groundwater standard requires a liner for the impoundment which is

> designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the impoundment.

40 C.P.R. 264.221(a); see 40 C.F.R. 192.32(a)(1) ("liner requirement"). This liner requirement applies only to new mill tailings impoundments or new portions of existing impoundments. EPA's standard provides the possibility of an exemption from the liner requirement where the operator can demonstrate

> that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see 264.93) into the ground water or surface water at any future time.

40 C.F.R. 264.221(b).

Petitioners and others sought this Court's review of EPA's general standards alleging that, inter alia, (1) EPA had not found that the mill tailings piles pose a "significant risk" prior to promulgating regulations; (2) EPA had not conducted a

(FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

Pub.L. No. 96-482, 7, 94 Stat. 2336, Oct. 21, 1980. On December 31, 1985, EPA issued its "Report to Congress: Wastes From The Extraction And Beneficiation Of Metallic Ores, Phosphate Rock, Asbestos, Overburden From Uranium Mining, And Oil Shale," but excluded-uranium mill tailings wastes from this study. On the basis of this study, EPA made a regulatory determination that regulation of mining wastes under Subtitle C was not warranted "at this time" and announced its plan to develop a program for mining wastes under Subtitle D. 51 Fed. Reg. 24496-97 (July 3, 1986). Subtitle D, "State or Regional Solid Waste Plans," requires EPA to prepare guidelines for use in state or regional programs.

cost-benefit analysis; and (3) EPA, in adopting groundwater standards from its SWDA regulations, should have analogize to low-toxicity, high-volume mining wastes rather than high-toxicity, low-volume chemical wastes. See American Mining Congress v. Thomas, 772 F.2d 640, (10th Cir. 1985), cert. denied, 476 U.S. 1158 (1986); see also American Mining Congress v. Thomas, 772 F.2d 617, (10th Cir. 1985), cert. denied, 476 U.S. 1158 (1986) (henceforth referred to as "Thomas").

This Court rejected all these challenges. The Court held "that [i]n the UMTRCA Congress commanded the EPA, the NRC, and the DOE to deal with the problems posed by uranium mill tailings" and that, in the face of this command "[i]t would be disingenuous to hold . . . that the EPA must make its own determination of whether radon emissions present a risk significant enough to warrant regulation under the UMTRCA." 772 P.2d at 627. This Court further held that EPA's active-site standards achieved a reasonable relationship between costs and benefits even though EPA's figures demonstrated "significant costs" to the industry. 772 F.2d at 646. With respect to EPA's adoption of its hazardous waste regulations to serve as groundwater standards under UMTRCA, this Court noted that "[t]he EPA made findings that conditions at tailing impoundments, are not sufficiently different from the conditions it considered in developing SWDA standards to necessitate a change in approach" and affirmed the regulations including, explicitly, EPA's liner requirement. 772 F.2d at 648.

3. NRC's Conforming Rulemakings

After the EPA published its general standards, the NRC initiated a two-step rulemaking designed to fulfill its duty under Section 84a(2) and Section 275f(3), 42 U.S.C. 2114(a)(2), 2022(f)(3), to conform its 1980 regulations to EPA's standards. The Commission proposed first to discharge completely NRC's conformance duty with respect to those parts of the EPA standards not derived from EPA's SWDA regulations (primarily the standards governing the release of radon into the atmosphere). 49 Fed. Reg. 46418 (November 26, 1984). This first-step rulemaking resulted in a final rule in 1995. 50 Fed. Reg. 41852 (October 16, 1985). 6/ Second, the Commission published an Advance Notice of Proposed Rulemaking, initially designed both to incorporate the UMTRCA standards EPA had adopted from its SWDA regulations (primarily groundwater protection) and to make any additional modifications found necessary to comply with NRC's duty under Section 84a(3) of the AEA, 42 U.S.C. 2114(a)(3), to assure that NRC's general requirements are comparable to EPA's SWDA regulations for similar hazardous material. 49 Fed. Reg. 46425 (November 26, 1984).

On July 8, 1986, the NRC published a proposed rule with respect to this second-step rulemaking, 51 Fed. Reg. 24697. Its proposed rule announced that NRC's groundwater conforming rule would "[i]ncorporate only those imposed provisions where NRC has

6/ The Court is considering petitions to review aspects of this rulemaking in EDP v. NRC, No. 86-1235, and in Quivira v. NRC, No. 85-2853.

no legal discretion to deviate on a generic basis." 7/ 51 Fed. Reg. 24701. The final rule was published on November 13, 1987. 52 Fed. Reg. 43553.

With respect to the issues raised by petitioners here, the Commission rejected comments asserting an NRC obligation to

perform a cost analysis in conforming its regulations to EPA's standards separate from the cost-benefit analysis EPA had already conducted in the first-step rulemaking:

> [I]t would be duplicative for the NRC to consider again risks and costs as part of the process of conforming its requirements to EPA's standards. EPA has already taken risks and costs into account in formulating its standards under section 275b(1). Recognizing that EPA would take these factors into account, the statute explicitly does not require the NRC to consider the same factors as part of the conformance process, see section 275f(3). This statutory provision, by its simplicity, just emphasizes Congress intent to make the conformance procedure as straightforward an adoption of the EPA standards as possible.

50 Fed. Reg. 41855 (emphasis in original).

As to comments urging revision of EPA's groundwater standards on the basis that mill tailings more closely resemble mining waste than the chemical wastes EPA regulates under SWDA, the Commission recognized that a future EPA rulemaking for mining

7/ The NRC postponed any "third-step rulemaking" designed to achieve comparability under Section 84a(3). NRC's alleged duty to undertake such a third-step rulemaking is an issue raised in EDP v. NRC, No. 88-1001. The proposed rule also provided a brief overview of the costs and benefits of six major features of the EPA standards being incorporated, see 51 Fed. Reg. 24704-24707, but emphasized that the Commission could only consider such costs on a site-specific basis in reviewing an alternative submitted by a licensee under Section 84c. See 51 Fed. Reg. 24704.

wastes might be of use in any additional discretionary rulemaking undertaken by the NRC. See 51 Fed. Reg. 24701; 52 Fed. Reg. 43556. However, the Commission did not view "its legal options to include generic alternatives to the standards proposed for incorporation" as opposed to approval of site-specific alternatives to both NRC and EPA regulations under the authority

of Section 84c of the A-EA, 42 U.S.C. 2114(c). 51 Fed. Reg. 24704.

The final rule incorporated EPA's liner requirement, 40 C.F.R. 264.221, into Criterion 5A of the Appendix A Criteria virtually without change." 52 Fed. Reg. 43558.

SUMMARY OF ARGUMENT

Congress commanded the NRC in Section 84a(2), 42 U.S.C. 2114(a)(2), to conform its management of mill tailings to general standards promulgated by EPA under Section 275b, 42 U.S.C. 2022(b). Congress explicitly required the NRC to amend its regulations to conform to those standards in Section 275f(3), 42 U.S.C. 2022(f)(3). The NRC has done so in the rulemaking at issue here. Petitioners' contention that the NRC has erred in not conducting a separate determination of the costs or appropriateness of EPA's standards prior to conforming them to the Commission's regulations is premised on the notion that certain exceptions to NRC's conformance duty lurk in the statute.

Under the first alleged "exception" to NRC's Section 84a(2) and Section 275f(3) conformance duty, the NRC is obliged to

re-examine the relationship between the costs and benefits of each EPA standard before incorporating the standard into NRC regulations. Such a duplicative effort is required, petitioners argue, by Congress's 1983 amendment to Section 84a(1) of the ABA, 42 U.S.C. 2114(a)(1), requiring the NRC to give "due consideration [to] the economic costs" of managing uranium mill tailings. This is simply a repetition of arguments already made by petitioners in Quivira Mining Company, et al. v. NRC, No. 85-2853, and has been answered by respondents in that case. The NRC's obligation to provide "due consideration of the economic costs" in its management program is in no way violated by NRC's reliance, in the conforming amendments at issue here, on EPA's cost-benefit analysis of its general standards, an analysis which has been affirmed by this Court.

Under the second alleged "exception" to NRC's Section 84a(2) and Section 275f(3) conformance duty, petitioners similarly

assert that the NRC is required to determine independently whether sufficient similarity exists between uranium mill tailings and low-volume, high-toxicity chemical waste to warrant application of the same regulatory regime for both forms of waste. Such a reanalysis is imposed, petitioners argue, by Section 84a(3) of the AEA, 42 U.S.C. 2114(a)(3), which requires the NRC to insure that its general requirements are "comparable" to EPA's requirements for "similar hazardous material" under the Solid Waste Disposal Act. Nothing in Section 84a(3), however, requires the NRC to second guess EPA's decision, affirmed by this Court in Thomas,

that low-volume, high-toxicity chemical waste is sufficiently "similar" to uranium and thorium mill tailings to apply generally the same standards for both.

Finally, petitioners complain that one particular aspect of NRC's amended regulations is flawed because of the NRC's refusal to recognize the alleged "exceptions" which they read into the NRC's mill tailings conformance duty. In particular they argue that Criterion 5A which requires new, or new portions of existing, mill tailings impoundments to include an impermeable liner to prevent or mitigate contamination of groundwater, is arbitrary and capricious because, inter alia, this requirement is too costly and too inflexible. Criterion 5A is taken directly from EPA's general standards. The NRC's refusal to except this standard from its congressionally-mandated conformance duty is in no way unlawful.

ARGUMENT

I. The Standard Of Review To Be Applied In This Case Is Narrow And Deferential

This case turns on whether the Commission has correctly interpreted Congress's intent, as specified in amendments to the Commission's organic statute, the Atomic Energy Act. The Supreme Court has spoken clearly on the limits of the judicial role when

reviewing "an agency's construction of the statute which it administers." Chevron U.S.A. Inc. v. Natural Resources Defense Council, 467 U.S. 837, 842 (1984). There are only two questions to be addressed:

> First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress. If, however, the court determines Congress has not directly addressed the precise question at issue, the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute.

Id. at 842-43 (footnotes omitted). Here Congress "has directly spoken to the precise question at issue," the NRC to conform its regulations to EPA's general standards. See also immigration and Naturalization Service v. Cardoza-Fonseca, 107 S.Ct. 1207, 1220 (1987).

With regard to judicial review of the NRC's informal rulemaking to carry out its statutory mandate, the deferent

"arbitrary and capricious" standard applies. 5 U.S.C. 70692)(a). Moreover, an unusual degree of judicial deference is due to NRC actions under the Atomic Energy Act and to the NRC's resolution of technical matters within its expertise. Courts have repeatedly observed that the statutory scheme which the NRC administers" . . . is virtually unique in the degree to which broad responsibility is reposed in the administrative agency, free of close prescription in its charter as to how it shall proceed in achieving the statutory objectives." Carstens v. NRC, 742 F.2d 1546, 1551 (D.C. Cir. 1984) cert. denied, 471 U.S. 1136 (1985), quoting Siegel v. Atomic Energy Commission, 400 F.2d 778, 783 (D.C. Cir. 1968). See e.g., Duke Power Co. v. NRC, 770 F.2d 386,

390 (4th Cir. 1985); Detroit Edison Co. v. NRC, 630 F.2d 450, 45-3 (6th Cir. 1980); Westinghouse Electric Corp. v. NRC, 598 P.2d 759, 771 and n. 47 (3d Cir. 1979). Moreover, NRC resolutions of technical matters, such as the regulation of uranium and thorium mill tailings, is precisely the kind of technical judgment "within its area of special expertise, at the frontiers of science (where] a reviewing court must generally be at its most deferential." Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc., 462 U.S. 87, 103 (1983).

II. UMTRCA Requires The NRC To Adopt EPA's General Standards

At bottom, this case presents but a single, simple question: can the NRC refuse to follow explicit Congressional direction that it conform its regulations for controlling uranium mill tailings to general standards issued by EPA. The cost-benefit analysis the petitioners insist on would obviously be pointless unless the NRC were free to refuse to conform to EPA standards if the Commission found that the cost of conforming outweighed the benefit. Similarly, a separate NRC determination as to whether the hazards posed by uranium mill tailings are sufficiently similar to the hazards posed by chemical wastes to warrant application of the same regulatory regime would be pointless unless the Commission were free to reject EPA's standards on-the ground that such similarity does not exist.

Congress's command to the NRC to adopt EPA's general standards for implementation in its mill tailings program appears in two separate sections of the statute. As originally enacted in 1978, Section 84a(2) of the AEA requires:

The Commission shall insure that the management of [mill tailings] is carried out in such manner as

(2) conforms with applicable general standards promulgated by [EPA] under section 275.

42 U.S.C. 2114(a)(2). 8/ Section 275f(3), added to the statute as part of the 1983 Amendments, reemphasizes this conformance duty and explicitly requires the NRC action challenged here: conformance of NRC's 1980 regulations to EPA's standards:

> Not later than 6 months after the date on which the Administrator promulgates final standards pursuant to subsection b. of this section, the Commission shall, after notice and opportunity for public comment, amend the October 3 regulations, and adopt such modifications, as the Commission deems necessary to conform to such final standards of the Administrator.

Section 275f(3), 42 U.S.C. 2022(f)(3).

This statutory mandate is clear. The petitioners in fact concede that Section 84a(2) of the AEA requires, inter alia, that the Commission's tailings management program conform to EPA standards, but they go on to make the astonishing argument that nothing in the statute "authorizes the Commission to assign such an overriding priority to that single requirement." Pet. Brief at 33. The assertion that an agency needs some kind of separate authorization before it can obey the laws established by Congress is unusual, to say the least. That is not how the laws work. The Commission must assign "overriding priority" to Section 84a(2) because, like Mt. Everest, it is there.

8/ Congress repeated this command in Section 275d of the AEA

> Implementation and enforcement of the standards promulgated [by EPA under subsection b],shall be the responsibility of the Commission in the conduct of its licensing activities under this Act. . . .

42 U.S.C. 2022(d).

Petitioners' arguments thus fail because they are at odds with clear statutory language. Petitioners argue that the Commission is free to alter EPA standards it finds objectionable. See Petitioners' Brief ("Pet. Brief") at 32-35. The NRC must

conform to the EPA standards, they say, unless the NRC independently finds that those standards are too costly for the benefits to be obtained, see Pet. Brief at 23-27, or unless the NRC determines that the EPA standard is inappropriate because derived from regulations designed for low volume, high-toxicity chemical waste rather than high volume, low-toxicity mining wastes, see Pet. Brief at 27-32, or unless the NRC determines that a particular standard, EPA's liner requirement, must be rejected for these and other reasons, see Pet. Brief at 35-46. Congress, however, provided no "unless." Congress required the NRC to adopt EPA's standards without exception. The NRC has done so in the rulemaking challenged here. Because NRC's adoption of EPA's standards carries out Congress's clearly-expressed intent in UMTRCA, NRC's action must be affirmed by this Court. See Chevron, supra.

A. Section 84a(1) Of The AEA Provides No Exception To NRC's Conformance Duty

Congress's directive to the Commission in Section 84a(2) to conform its mill tailings program to EPA's standards says nothing about any duty of the NRC to separately consider the costs of those standards, much less to conduct a cost-benefit analysis of each amended regulation as desired by petitioners. Neither

does Section 275f(3), where Congress most recently expressed its intent with respect to NRC's conformance duty. Section 275f(3) focuses explicitly on the application of that conformance duty to the NRC's 1980 regulations: "Not later than 6 months" after issuance of the standards, "the Commission shall . . . amend the [1980] regulations" and "adopt such modifications, as the Commission deems necessary to conform to such . . . standards." 9/ Section 275f(3), 42 U.S.C. 2022(f)(3). The tight six-month schedule for achieving conformance obviously provided no time for an independent cost-benefit analysis of EPA's standards.

There would have been no sense anyway in imposing such a requirement on the Commission because Congress, in the 1983 Amendments, required EPA to consider the cost of its standards:

In establishing such standards, the Administrator shall

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.

9/ The Conference Report on the 1983 Amendments is similarly silent with respect to any duty of the Commission to re-analyze EPA's standards with regard to costs and benefits in fulfilling its duty under Section 275f(3) to amend its regulations. Rather the section of the Conference Report explaining Congress's adoption of Section 275f(3) emphasizes Congress's concern with haste:

Upon promulgation by EPA of its final active site standards, the Commission shall have until April 1, 1984 to conform its regulations to EPA's standards. . . . [T]he conferees fully expect that this six month period of time is of sufficient length to enable the Commission to provide notice and opportunity for public comment prior to reaching its determination.

H.R. Conf. Rep. 884, 97th Cong., 2d Sess. 46-47 (1982).

Section 275b(1), 42 U.S.C. 2022(b)(1). EPA did so. This Court held that the EPA properly considered cost-benefit factors in establishing its standards. Thomas, 772 F.2d at 646. A separate cost-benefit analysis by the NRC would be a pointless duplication of work already done by the EPA.

Despite the fact that EPA has performed a cost-benefit analysis of its standards approved by this Court and despite the fact that the NRC amendments at issue here do no more than incorporate those standards into NRC regulations, petitioners repeat the argument they have already made in Quivira v. NRC, No. 85-2853. In particular, they argue that Congress's 1983 amendment of Section 84a(1), 42 U.S.C. 2114(a)(1), which requires the Commission to give "due consideration [to] the economic costs" of its program for controlling mill tailings, obligates the NRC to conduct a cost-benefit analysis of its regulations, including amendments simply designed to incorporate

the EPA standards. Pet. Brief at 23-27; 32-35.

The Commission gives "due consideration" to economic cost at all stages of its management program. See 50 Fed. 41855. NRC considered cost in promulgating its 1980 regulations. 10/

10/ Amended Section 84a(1) does not mandate a cost-benefit analysis for those parts of the Appendix A Criteria not affected by the EPA standards for the reasons already explained in Respondents' Brief in Quivira V. NRC, No. 85-2853, at 21-29. Congress explained its selection of the "due consideration of the economic costs" language inserted into Section 84a(1) as having been chosen because [tlhis language reflects accurately the

(FOOTNOTE CONTINUED ON NEXT PAGE)

Moreover, the NRC will consider cost when it considers, under its Section 84c authority, licensee-proposed site-specific alternatives to NRC's general requirements. Such consideration will require the NRC to determine whether a proposed alternative "will achieve a level of protection . . . equivalent to, to the extent practicable, or more stringent than the level which would be achieved by [NRC's requirements and EPA's standards]." Section 84c, 42 U.S.C. 2114(c). Thus Section 84a(1) is in no way deprived of "an effective purpose," see Pet. Brief at 26, simply because in one aspect of its regulatory program--conforming to EPA's general groundwater standards--the NRC relied on EPA's cost-benefit analysis. 11/ Nor is the NRC somehow assigning "an

(FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

current regulatory approach of the agenc[y]" (emphasis added). See H.R. Rep. No. 97-884 (Conference Report) 97th Cong., 2d Sess. 47 (1982). Thus Congress did not intend that the the NRC conduct any additional cost analysis on the unamended criteria.

11/ On the basis of evidence not in the record, petitioners allege that "events have demonstrated that EPA's analysis is no longer reliable," Pet. Brief at 26. Similarly, petitioners rely

on a National Academy of Sciences report, "Scientific Basis for Risk Assessment and Management of Uranium Mill Tailings" (1986), also not in the record, in support of their view that the hazards posed by mill tailings are actually less than Congress, EPA and this Court supposed. See, for example, Pet. Brief at 28, n. 48. Petitioners appear to believe that such "evidence" requires the NRC to do its own economic analysis and, presumably, promulgate different standards if its analysis so requires. Even assuming this extra-record evidence reveals deficiencies in the EPA standards, petitioners' remedy is not to ask the NRC to ignore a Congressional mandate. As this Court noted in Thomas:

(FOOTNOTE CONTINUED ON NEXT PAGE)

overriding priority to [Section 84a(2)]" to the neglect of other provisions of Section 84a. 12/ See, Pet. Brief at 33.

B. Section 84a(3) Provides No Exception To NRC's Conformance Duty

While the nonradioactive constituents in mill tailings may be more comparable to the hazards in mining wastes than to the hazards in chemical wastes, see 51 Fed. Reg. 24701, EPA determined that conditions at tailings impoundments were not sufficiently different from conditions EPA considered in developing its SWDA standards for low-volume, high-toxicity chemical wastes to justify

(FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

[T]he industry petitioners' arguments that the costs are too high for the benefits gained . . . should be addressed to Congress or to the EPA, not to this court.

772 F.2d at 646. One other possibly appropriate course might be that taken by petitioner American Mining Congress when it initiated a direct challenge to EPA's standards by requesting, an October 19, 1987, that EPA conduct a negotiated rulemaking designed to revisit EPA's standards at both active and inactive sites.

12/ Petitioners argue that the Commission's rejection of EPA's concurrence requirement (40 C.F.R. 192.32(a)(2)(iv) and (v)) demonstrates that the Commission "believ[es] that it has a right--and indeed an obligation--to reject aspects of the EPA standards that are inconsistent with the statutory scheme." Pet. Brief at 34 (emphasis added). The Commission has never claimed a right to generically alter an EPA standard. In rejecting EPA's assertion of a concurrence authority, the Commission emphasized that it was adopting the substantive EPA standard in question and was rejecting only the procedural requirement that it obtain EPA's concurrence in NRC's site-specific decisions. See 51 Fed. Reg. 24703. Thus NRC's rejection of this procedural requirement affords no basis for petitioners' broad assertion that the NRC has the authority to reject EPA's general substantive standards on a generic basis.

departing from those standards. 48 Fed. Reg. 45941. This Court affirmed EPA's SWDA-derived groundwater standards. 772 F.2d at 648. Under the NRC's congressionally-mandated conformance duty, EPA's comparability determination, as affirmed by this Court, is binding on the NRC insofar as EPA has adopted certain of its SWDA standards to serve as its general standards under UMTRCA.

Petitioners claim that the NRC has an independent duty to assure that its regulations are comparable to SWDA requirements and that part of that duty is to re-examine the similarity of the hazards presented by uranium mill tailings with the hazards posed by the low-volume, high-toxicity chemical waste which EPA regulates under Subtitle C of SWDA, see Pet. Brief at 27-32. No such duty appears in Section 84a(3), which requires that the NRC assure-that its management of mill tailings

conforms to general requirements established by the Commission, with the concurrence of the Administrator, which are, to the maximum extent practicable, at least comparable to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulated by the Administrator under the Solid Waste Disposal Act, as amended.

42 U.S. C. 2114 (a) (3).

This statute requires that NRC's general requirements, including its regulations, be "comparable" to EPA's SWDA requirements for "similar hazardous material." NRC's regulations at issue here are clearly "comparable" to EPA's SWDA requirements for hazardous waste since they are practically identical to those requirements. EPA, at present, has no requirements for mining

waste. 13/ EPA determined that there was sufficient similarity between uranium mill tailings and chemical wastes to warrant application of the same standards to both forms of waste, and this Court affirmed. See Thomas 772 P.2d at 648. Nothing in Section 84a(3) permits the NRC to reverse EPA's determination as to what constitutes "similar hazardous material" with respect to the standards EPA has chosen to adopt under UMTRCA. 14/

C. The NRC Is Legally Obligated To Adopt EPA's Liner Requirement

EPA's primary groundwater standard requires that "[s]urface impoundments (except for an existing portion) . . . must be designed, constructed, and installed in such wanner as to conform to the requirements of 264.221." 40 C.F.R. 192.32(a)(1). Section 264.221 specifies, in relevant part, that "[a]ny surface impoundment . . . must have a liner for all portions of the impoundment (except for existing portions of such

13/ Petitioners note that Congress had barred the EPA from applying SWDA regulations to certain mining wastes pending an agency study (which did not include uranium mill tailings) that was incomplete at the time the EPA was required to promulgate final regulations for the active mill sites, and that EPA subsequently determined that the SWDA regulations were not appropriate for mining wastes. Pet. Brief at 29-30. See 51 Fed. Reg. 24496 (July 3, 1986). This may be a reason for petitioners to seek revision from EPA but it affords no basis for the-NRC not to perform its statutory duty.

14/ With respect to any future discretionary rulemaking to adopt additional requirements to assure that NRC's regulations are "comparable" to EPA's SWDA requirements, as required under Section

84a(3), the NRC may refer to any future EPA rulemaking bringing mining wastes under SWDA regulations. The NRC would need EPA's concurrence in promulgating such regulations.

impoundments)." 40 C.F.R. 264.221(a). Section 264.221 provides an exemption to the liner requirement where the operator demonstrates that alternate design and operating practices "will prevent the migration of any hazardous constituents into the ground water or surface water at any future time." 40 C.F.R. 264.221(b). 15/ The NRC adopted EPA's primary groundwater standard, almost verbatim, into Criterion 5A of Appendix A.

Petitioners' argument that the NRC may disregard this standard because it is allegedly "exceedingly costly," see Pet. Brief at 36-37, has already been answered. 16/ See, Argument IA.

15/ This Court reviewed EPA's primary groundwater standard in the context of the Thomas petitioners' argument that EPA, in promulgating this standard, had impermissibly imposed management, design, and engineering requirements more appropriate to NRC's implementing function. See 772 F.2d at 647-48. The Court, in rejecting this argument, recognized that

[a]lthough the [EPA] regulations require a "liner" for new piles and extensions thereof, we understand that term to refer to any impermeable barrier the NRC may approve that will prevent seepage.

772 P.2d at 648. NRC's adoption of EPA's liner requirement into Criterion 5A of the Appendix A Criteria simply requires the impermeable barrier the Court approved in Thomas.

16/ Petitioners argue that the liner requirement is technically unsound because an effective impermeable liner "creates the danger of accumulation of leachate in a "bathtub effect."' Pet. Brief at 37-38. EPA considered this problem at the time the general standards were issued. See Final Environmental impact Statement For Standards For The Control Of Byproduct Materials From Uranium Ore Processing (40 C.F.R. 192), Vol. II., EPA 520/1-83-008-2 (September 1983), A.4-11. EPA concluded that proper disposal

methods at "dry sites," where most mill tailings are located, would be likely to prevent this from occurring. Id. EPA further concluded that the "bathtub effect" at "wet sites" could be

(FOOTNOTE CONTINUED ON NEXT PAGE)

Petitioners complain as well that the liner requirement is too inflexible because the exemption provided in Criterion 5A(3) is allegedly unobtainable, see Pet. Brief at 41-44. Petitioners themselves, however, are forced to admit that the plain language of Section 84c of the AEA expressly gives the NRC the authority to consider alternatives to the Appendix A Criteria which will achieve an equivalent level of containment, "to the extent practicable." 17/ See Pet. Brief at 39, 42-43. If the liner requirement is actually impossible to achieve at a given site then it would be reasonable to interpret Section 80c as allowing the NRC to consider practicable alternatives proposed by the licensee. The licensee may then propose an alternative meeting Criterion 5A(3) "to the extent practicable." 18/

(FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

avoided by requiring the closure cover to have a permeability less than or equal to that of any liner beneath the tailings so the pile will not fill with water. See 48 Fed. Reg. 45940.

17/ The Commission interprets "practicable" in a manner consistent with the "as low as is reasonably achievable" ("ALARA") policy stated in its regulations. 10 C.F.R. Part 20. See 50 Fed. Reg. 41855. Under the ALARA policy the benefits of further reduction in exposure to radiation are weighed against the costs of achieving those reductions.

18/ Petitioners speculate that the NRC will not use its Section 84c authority to accept de minimis quantities of leakage in an alternative presented by a licensee to the requirement in Criterion 5A(3) that an alternative prevent leakage "at any future time," despite the Commission's explicit statement to the contrary in the Supplementary Information section of the final rule, 52 Fed. Reg. 43558. See Pet. Brief at 42. If the NRC rejects such a

licensee-proposed Alternative, the licensee may complain on

(FOOTNOTE CONTINUED ON NEXT PAGE)

27

Finally, petitioners claim that the NRC's definition of "existing portion" somehow retroactively and illegally applies the liner requirement to September 30, 1983. See Pet. Brief at 44-46. Of course had EPA required a liner under all tailings piles--new or preexisting--this would not have been an illegally "retroactive" rulemaking. Petitioners make no effort to explain how a requirement to line piles created after September 30, 1983, can somehow be "retroactive," any more than a city ordinance requiring homeowners to prune trees planted five years before the date of the ordinance. The Commission was under a Section 84a(2) duty to insure that its management of mill tailings conforms to EPA's standards independent from any duty imposed by its own regulations promulgated for the control of mill tailings. Similarly, Section 275d requires the NRC to implement and enforce the EPA standards during the conduct of NRC's licensing activities. These provisions of the UMTRCA required the Commission to apply EPA's standards on a case-by-case basis in its licensing activities from the moment those standards were promulgated by EPA, including the period prior to completion of NRC's conforming rulemakings. See

(FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

judicial review if its alternative is rejected in an arbitrary and capricious manner. Cf. Westinghouse Electric Corp. v. NRC, 555 F.2d 82, 92 (3d Cir. 1977) (no need for a court to anticipate that applications of a rule in specific instances may violate statutory policy and "ample opportunity for judicial intervention" to prevent such violations).

28

50 Fed. Reg. 41853-54. 19/ By conforming to this EPA standard in its final rule the NRC has not engaged in any illegal "retroactive" rulemaking.

19/ The Commission gave notice of this legal duty with respect to the standards adopted here in its Advance Notice of Proposed Rulemaking. 49 Fed. Reg. 46426.

CONCLUSION

For the reasons set forth herein, the Petition for Review should be denied. We believe oral argument might be useful to the Court, particularly to clarify the relationship between this case and several related matters now pending before this Court. Quivira v. NRC, No. 85-2853; EDF v. NRC, No. 86-1235; and EDF v. NRC, No. 88-1001.

Respectfully submitted,

WILLIAM H. BRIGGS, JR.
Solicitor

E. LEO SLAGGIE
Deputy Solicitor

E. NEIL JENSEN
Attorney
Office of the General Counsel
U.S. Nuclear Regulatory
Washington, D.C. 20555

ATTACHMENT 1

Uranium Mill Tailing Regulations; Ground-Water Protection and Other Issues
52 Red. Reg. 43553 (November 13, 1987)

Federal Register / Vol. 52. No. 219 / Friday, November 13, 1987 / Rules and

Regulation 43553

PART 1610ÄÄ(AMENDED)

1. The authority citation for 7 CFR 1610 continues to read:

Authority: 85 Stat. 29 et seq., 7 U.S.C. 931 et seq., as amended at Pub. L 93-32 87 Stat 65 et seq.

2. The text of 1610.5 is designated as paragraph (a) and new paragraph (b) is added to read as follows:

1610.5 Concurrent REA and Bank loans.

(a) * * *

(b) Except as provided below, notes for loans approved by the Governor on or after December 1, 1967, shall provide that each advance thereunder shall bear interest at the cost on money rate determined by the Governor. Existing unprocessed loan applications that have progressed loan applications that have progressed to the stage that the applicant has been notified in writing of the characteristics of the loan by the publication date of this rule, will be processed in accordance with the previous rule at the option of the applicant. The fixed interest rate for these loans will be the current RTB rate of seven and one half (7.5) percent. Such applicants must notify the Governor in writing of the exercise of such option by December 18, 1987 or such loans shall be processed in accordance with the above rule. The RTB can not assure that requisitions for advance received after the 16th of the month will be advanced in that month.

Dated: November 9, 1987.

Jack Van Mark,
Acting Governor, Rural Telephone Bank.

[FR Doc. 87-28309 Filed 11-12-87: 8:45 am]

BILLING CODE 3410-15-M

NUCLEAR REGULATORY COMMISSION

10 CFR Part 40

Uranium Mill Tailing Regulations; Ground-Water Protection and Other Issues

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is amending its regulations governing the disposal of uranium mill tailings. The changes incorporate into existing NRC regulations the ground-water protection regulations published by the Environmental Protection Agency (EPA) for these wastes. This action is being taken to comply with the mandate in the Uranium Mill Tailings Radiation Control Act and the NRC Authorization Act for FY 1983 to conform the NRC regulations to the standards promulgated by the EPA.

EFFECTIVE DATE: December 14, 1987.

ADDRESS: Comments received on the advance notice of proposed rulemaking and proposed rule may be examined at the Commission's Public Docket Room, 1717 H Street NW., Washington, DC between 7:30 and 4:15 pm weekdays.

FOR FURTHER INFORMATION CONTACT:
Robert Fonner, Office of the General Counsel, telephone (301) 492-8692, or
Kitty S. Dragonette, Division of Low-Level Waste Management and Decommissioning, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 427-4763.

SUPPLEMENTARY INFORMATION:

VIII. Paperwork Reduction Act Statement.

IX. Regulatory Flexibility Certification.

X. List of Subjects in 10 CFR Part 40.

XI. Modifications.

I. Background

The Nuclear Regulatory Commission (NRC or Commission) is issuing additional modifications to its regulations for the purpose of conforming them to generally applicable requirements promulgated by the Environmental Protection Agency (EPA). The EPA requirements contained in Subparts D and E of 40 CFR Part 192 (48 FR 45926: October 7, 1983) apply to the management of uranium and thorium byproduct material and became effective for NRC and Agreement State licensees and license applicants on December 6, 1983. This action modifies existing regulations of the Commission to incorporate the EPA ground water protection requirements found in 40 CFR Part 192. The affected Commission regulations are contained in Appendix A to 10 CFR Part 40 which was promulgated in final form on October 3, 1980 (45 FR 65521 and amended on October 16, 1985 (50 FR 41852) to conform to the provisions of the EPA standards affecting matters other than ground-water protection.

EPA developed and issued its regulations pursuant to section 275b. of the Atomic Energy Act of 1954, as amended (AEA) (42 U.S.C. 2022): section 275b was added by section 206 of Pub. L 95-604, the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA). These EPA regulations included by cross-reference, certain regulations issued by EPA under the Solid Waste Disposal Act (SWDA). Under section 18(a) of Pub. L 97-415, the Nuclear Regulatory Commission Authorization Act for fiscal years 1982 and 1983, the Commission was directed to conform its regulations to EPA's with notice and opportunity for public comment.

The additional action that the Commission might take to amend its mill tailings regulations for ground-water protection was the subject of an advance notice of proposed rulemaking (ANPRM) published for comment on November 26, 1984 (49 FR 46425). The NRC issued a notice of proposed rulemaking on ground-water protection on July 8, 1986 (51 FR 24697).

II. Description of Proposed Amendments

The EPA requirements in 40 CFR Part 192 (48 FR 45926) included, by cross-reference, ground-water protection standards in 40 CFR Part 264. Part

264 was promulgated by the EPA pursuant to authority provided by the Resource Conservation and Recovery Act (RCRA), which amended the SWDA. Part 264 itself contains references to other EPA rules and a number of internal cross references. The proposed modifications were intended to conform the NRC rules to the provisions of 40 CFR Part 192 not addressed in the earlier conforming action (30 FR 41852; October 16, 1985). The following specific sections of 40 CFR Part 264 were proposed for incorporation in modified text form into Appendix A. (Note that 40 CFR Part 192 incorporated SWDA rules as codified on January 1, 1983.) EPA imposed these sections in its final standards published October 7, 1983 (48 FR 45942).

Subpart F:

40 CFR 264.92 ground-water protection standard.

40 CFR 264.93 Hazardous Constituents.

40 CFR 264.94 Concentration limits.

40 CFR 264.100 Corrective action program.

Subpart G:

40 CFR 264.111 Closure performance standard.

Subpart K:

40 CFR 264.221 Design and operating requirements for surface impoundments.

43554 Federal Register / Vol. 52. No. 219 / Friday, November 13, 1987 / Rules and Regulations

EPA suggested that NRC address the following specific sections in implementing the listed imposed sections. However, EPA did not make them legally binding requirements on NRC and Agreement States mill licensees and they were not included in the proposed rule. NRC will review these and other SWDA regulations intensively for their potential application to mill tailings disposal in complying with section 84a(3). This parovision of the Atomic Energy Act requires the NRC to review the full suite of SWDA requirements for comparable hazardous materials in order to ascertain which if any should be applied to mill tailings in addition to the specific SWDA rules referenced in 40 CFR Part 192. These later are subject to conformance pursuant to sections 84a(2) and 275(3) of the Atomic Energy Act. Some of the additional matters to

be reviewed are found in the following EPA rules:

Subpart F:

40 CFR 264.91 Required programs.

40 CFR 264.95 Point of compliance.

40 CFR 264.96 Compliance period.

40 CFR 264.97 General ground-water monitoring requirements.

40 CFR 264.98 Detection monitoring program.

40 CFR 264.99 Compliance monitoring program.

Subpart G:

40 CFR 264.117 Post-closure care and use of property.

Subpart K:

40 CFR 264.226 Monitoring and inspection.

40 CFR 264.228 Closure and post-closure care.

The information set out in Table 1 shows the status of specific ground-water provisions imposed by EPA regulations and indicates the location of the provision in the changes to NRC's rules. (Note that the clarifying changes to the final rule do not affect the information provided in the table.)

TABLE 1.ÄÄ RELATIONSHIP OF 40 CFR AND 10 CFR PROVISIONS

EPA Designation	NRC designation in appendix A to 10 CFR Part 40	Subject
	Subpart D (Uranium)	
40 CFR 192.30		Applicability

Introduction.
40 CFR 192.31 Definitions and cross-reference
Introduction.
40 CFR 192.32(a)(1) Impoundment design (primary ground-water standard
5A(1).
40 CFR 192.32 Secondary ground-water standard
5B(1).
(a)(2):
(i) Mo and U added
Criterion 13.
(ii) Radioactivity limits
5C.
(iii) Detection monitoring
7A.
(iv) ACI conditions
Deleted.
(v) EPA concurrences
Deleted.
40 CFR 192.32(a)(3) and (4) (Non ground-water)
Criterion 6.
40 CFR 192.32(b)(1) and (2) Closure standard
Criterion 6.
40 CFR 192.33 Corrective actions
5D.
40 CFR 192.34 Effective date

Subpart E (Thorium)

40 CFR 192.40 Applicability
Instruction.
40 CFR 192.41:
(a) Thorium same as uranium
Factored into test.
(b) (Non ground-water)
Criterion 6.
(c) Radium 228 same as 226
Factored into test.
(d) (Non ground-water)
Criterion 8.
40 CFR 192.42 Procedure for alternate standards
Deleted.
40 CFR 192.43 Effective date

Referenced Regulations

40 CFR 264.92 5B(1).	Ground-water standard
40 CFR 264.93:	
(a) Criterion 13.	Hazardous constituents and Appendix VIII OF 40 CFR 261
(b) 5B(3).	Excluding hazardous constituents
(1)(i)-(ix) 5B(3)(a)(i)-(ix).	Ground-water factors
(2)(i)-(ix) 5B(3)(b)(i)-(ix).	Surface water factors
(c) 5B(4).	Aquifer status
40 CFR 264.94:	
(a)(1)-(3) 5B(5)(a)-(c). 5C.	Concentration limits
(b) 5B(6).	Alternate concentration limits
(1)(i)-(ix) 5B(6)(a)(i)-(ix).	Ground-water factors
(2)(i)-(x) 5B(6)(b)(i)-(x).	Surface water factors
(c) 5B(4).	Aquifer status
40 CFR 264.100:	
(a) 5D.	Corrective action
(1)-(4) Deleted.	Procedural
(b) 5D.	Remove of treat
(c) Deleted.	Procedural
(d) 7A.	Monitoring program
(e) 5D.	Action to site boundary
(1) Deleted.	Procedural
(2) 5D.	Terminating program
(f)	Terminating program

5D.
(g) Procedural
Deleted.
(h) Procedural
Deleted.
40 CFR 264.111(a) & (b) Closure standard
Criterion 6.
40 CFR 264.221:
(a) Liner designe
5A(1).
(1) Liner properties
5A(2)(a).
(2) Liner foundation
5A(2)(b).
(3) Liner area
5A(2)(c).
(b) Exemption from 264.22(a)
5A(3).
(1)-(4) Factors in exemption
5A(3)(a)-(d).
(c) Impoundment overtopping
5A(4).
(d) Dike design
5A(5).
(e) Procedural
Deleted.

Federal Register / Vol. 52, No. 219 / Friday, November 13, 1987 / Rules and Regulations 43555

III. Overview of Comments in Responses to the Proposed Rule

The NRC issued a notice of proposed rulemaking on ground-water protection for uranium mills on July 8, 1986 (51 FR 24697). The comment period on the proposed rule originally expired on September 8, 1986 but was extended until November 7, 1986 (51 FR 32217: September 10, 1986). Twelve commenters responded with thirteen sets of comments. Respondents included three environmental or public interest groups, four industrial representatives, three states, the EPA, and the Department of the Interior.

Comments were offered on both general issues and the specific changes in the proposed rule and reflected diverse views. The general issues included the scope of the rulemaking, the EPA standards, implementation and enforcement of

the standards, and other miscellaneous topics. Most of the general issue comments were restatements of earlier views on the same issue. No major new issues were raised that had not been aired in one or more of the previous rulemaking actions associated with NRC's conformance to the EPA standards.

The scope of the proposed rule was limited to incorporating requirements legally imposed by 40 CFR Part 192 into NRC rules. General requirements to address section 84a(3) of the AEA requirements for comparability with EPA requirements for similar materials under SWDA were not proposed. Some commenters urged NRC to expand the scope of the rulemaking and others agreed with NRC's proposed rule. Commenters offered both supportive and opposing comments on the overall strategy reflected by the EPA regulations and on specific provisions of those regulations. Implementation and enforcement issues included concern about the dual regulation resulting from recent EPA rulemaking in to CFR Part 61 on mill operations.

The proposed rule included changes to the Introduction and Criteria 5, 6, and 7 of Appendix A and the addition of new Criterion 13. Comments were offered on each. Comments addressed four of the 14 proposed definitions in the Introduction. Industry was concerned about the consequences of defining the saturated zones from leaking impoundments as aquifers. Environmental commenters urged a point of compliance closer to the impoundments. Comments on the primary design standard were extensive and divergent. For example, environmental groups objected to flexibility for alternatives to synthetic liners and industry opposed the use of synthetic liners. Comments on the secondary standard were also extensive. Industry commented that the focus of the standard is ground water naturally present before operations began. The provisions dealing with how to establish which constituents to monitor were particularly confusing to commenters. The exclusion of EPA site-specific concurrences on alternate concentration limits and delisting of hazardous constituent was opposed by EPA and environmental groups and supported by industry. NRC's interpretation of the flexibility afforded by section 84c of the AEA continues to be controversial. Environmental commenters opposed the option for alternate concentrations and expressed concern over delays in implementing corrective action programs. The only area where consensus appeared was that the list of constituents in proposed Criterion 13 should be shortened to focus on constituents of concern at mill tailings sites.

A staff analysis of all the comments received is available in the NRC's Public Document Room. The following discussion summarizes and responds to all comments of major or generic significance and to all comments that prompted additional rule changes.

IV. General Issues

Scope of Rulemaking

Comments: An environmental group urged NRC not to defer development of detailed prescriptive RCRA comparable requirements under section 84a(3) of the AEA, EPA urged NRC to promptly schedule a third rulemaking or other action requiring EPA concurrence to comply with section 84a(3) if the proposed rule is not expanded. The Department of the Interior suggested that a five-year delay in re-examining the need for comparable rulemaking nay be too long in view of the rapid changes occurring in the field and suggested re-examination in two years. Industry commenters supported deferring discretionary rulemaking to add additional RCRA requirements.

Arguments in support of expanded scope included the existing and potential ground-water contamination at mill sites, the view that licensees will contest site specific decisions and guidance documents and delay implementation and expectation that the industry will recover from its depressed state based on Department of Energy (DOE Actions. EPA commented that the proposed rule does not fulfill NRC's responsibilities under section 84a(3) of the AEA. EPA restated the view that NRC should incorporate those additional provisions of the SWDA rules listed as appropriate for NRC to address in EPA's October 7, 1983 final rule notice (see 48 FR 45942). EPA objected to NRC's reliance on policies or license conditions to fulfill SWDA comparability until additional rulemaking is undertaken because of lack of opportunity for EPA concurrence as required by section 84a(3). EPA also commented that none of EPA"s regulatory decisions concerning other mining or milling wastes have any relevance to NRC's decisions on scope and industry commented that these EPA decisions are relevant and support deferring discretionary rulemaking by NRC.

Response: The Commission agrees that this conforming action does not fully satisfy section 84a(3) and that a third round of rulemaking will probably be necessary to comply fully. The Commission also agree that regulation of ground-water contamination from mill tailings impoundments is warranted but consider the real issue to be best use of resources and the level of detail needed to accomplish effective regulation. The Commission considers that the most responsible use of limited resources is to: (1) Complete conformance. (2) not duplicate major work EPA is doing, (3) focus on site-specific implementation and enforcement of the basic standards at existing sites, and (4) use the collective NRC and Agreement State implementation experience to provide a more sound basis for future section 84a(3) rulemaking.

Detailed regulations would not eliminate the licensee's right to propose alternative implementation requirements under section 84c and use this means to contest and delay implementation. The Commission agrees with commenters that detailed regulations could provide licensees with a better understanding of what is expected and could reduce the burden on licensees to develop

alternatives. However, the site specific and technical problems described by commenters emphasize the difficulty of addressing these matters in regulations.

The view that the nonviability of the industry is a temporary matter is not reflected in the Secretary of Energy's latest finding on viability or with the State of Wyoming's assessment of the future of the industry in that State. In Secretary John S. Herington's letter to the President dated December 19, 1986, he stated that "I have determined that for the calendar year 1985, the domestic uranium mining and milling industry was not viable." In a November 1966 report. Wyoming stated "* * * it seems

unlikely that the uranium mining and milling industry will ever again play a significant role in Wyoming's mineral economy. The reserves are here, but market and competition factors make the future appear bleak, to say the least."

The additional regulations that EPA and others suggested NRC address are undergoing major revision by EPA. 40 CFR 264.98 and 264.99 are two sections suggested for incorporation into NRC rules to address section 84a(3) SWDA comparability. However, a final EPA rule (July 8, 1987; 52 FR 25942) significantly these provisions. They did require analyses of all 40 CFR Part 261, Appendix VIII constituents (i.e., the list in Criterion 13 of this rulemaking without the 40 CFR 192 additions). In the proposed rule (July 24, 1986; 51 FR 26632) EPA acknowledged major practical and technical problems with these analyses. The final rule notes the evolving nature of these specific provisions. An advance notice of proposed rulemaking published by EPA August 20, 1986 (51 FR 29812) addresses technical difficulties with the prescriptive statistical test included in 40 CFR Part 264. This test is included in the regulations EPA indicated NRC should address. A proposed EPA rule addressing some of the difficulties was published August 24, 1987 (52 FR 31948) for public comment. The Commission views the acknowledged technical difficulties with these provisions of 40 CFR Part 264 to be sufficient reason to delay conformance to them. NRC should not duplicate the EPA effort by trying to develop the technical, environmental, and cost/benefit analyses to support similar rulemakings.

Prior to NRC's establishment of "general requirements." NRC can monitor EPA's rulemaking and consult on specific issues as necessary.

EPA has issued two notices on regulation of other mining and milling wastes: (1) 51 FR 24496; July 3, 1986 and (2) 51 FR 36233; October 9, 1986. EPA is

correct that these notices have no direct legal bearing on NRC and Agreement State licensees. EPA is addressing how it plans to regulate mining and milling wastes other than uranium and thorium mill tailings. Based on technical considerations, however, the Commission continues to anticipate that EPA's developments in this area may be relevant to implementation of 40 CFR Part 192 and to additional requirements that the Commission may establish under section 84a(3) of the AEA.

Common technical aspects apparent from these 1986 notices concern volumes, impoundment size, climate,remote location, deep ground water, and backfitting to existing sites.

When NRC should initiate a third rulemaking is difficult to specify. For example, EPA hopes to propose regulations for other mining and milling wastes by mid-1988. The timing for a final EPA rule statistical tests is uncertain. EPA may also initiate additional rulemaking on monitoring on other relevant topics as these standards are implemented. Recovery of the industry remains uncertain. The recommendation to reassess in two years instead five has merit. The Commission will periodically reassess (e.g. about ever two years) the question of when a third rulemaking should be initiated.

Comments on 10 CFR Part 192

Comments: comments on the basic value, validity, lawfulness, or appropriateness of EPA's regulations were explicitly not requested. However, commenters offered comments on the overall strategy reflected by the EPA regulations and on specific parts of the regulations imposed. The latters are discussed later under the specific proposed modifications. A public interest group commented that a more clearly defined and protective purpose is needed based on protection of all ground water regardless of quality with no provisions for any flexibility.

Response: Such a change in strategy would required EPA to change 40 CFR Part 192 and referenced regulations and is therefore outside the scope of this action.

Implementation and Enforcement

Comments: An environmental group urged the NRC to reiterate that 40 CFR Part 192 is directly in force on NRC and Agreement State licensees and to aggressively enforce those standards. Industry urged more responsiveness to site specific alternatives proposed by licensees. Industry identified the overlap between recent EPA Clean Air Act work practice standards for mills added to 40 CFR Part 61 (51 FR 34056; September 24, 1986) and NRC's implementation and enforcement of 40 CFR Part 192 and expressed concern about

NRC's continued ability to consider site specific alternatives.

Response: The Commission is implementing and enforcing the EPA standards are required by law. The language in sections 84c of the AEA was incorporated into the Introduction of Appendix A to 10 CFR Part 40. The NRC is thus obligated to consider site specific alternatives proposed by licensees by law and agency rule. If a licensee disagrees with the site specific decision on the proposed alternative agency procedures provide an avenue for review.

Industry is correct that EPA's Clean Air Act standards in 40 CFR Part 61 require site specific EPA actions, e.g., EPA approval to construct a new impoundment. The EPA 40 CFR Part 61 standards incorporate the ground-water protection standards in 40 CFR 192.32 (a): thus, both EPA and NRC will be implementing and enforcing these standards, NRC has no legal basis to challenge this dual regulation. NRC jurisdictional arguments rejecting EPA site specific actions are based on EPA actions under the Atomic Energy Act and have no applicability to EPA Clean Air Act actions.

Other

Comments: A State commented that NRC should view the requirement for compatible Agreement State regulation, to the extent practicable, as giving agreement States rulemaking latitude when warranted by the economic burden on State agencies. Another State commented that "it should be clear that where States standards are more stringent than Federal standards then the State standards should apply."

Response: The first State appears to be suggesting that the resource burden of issuing regulations that are compatible with the Commission's should be considered and might be sufficient grounds for the State not to adopt compatible regulations. The Commission does not read section 2740 of the AEA as providing this consideration. Agreement States will need to amend their regulations. However, as reflected in 10 CFR 150.31(d), States may adopt alternative generic or site-specific standards with Commission approval and public notice.

The second state seems to be addressing the circumstance when NRC and a non-Agreement State are regulating the same constituent under concurrent jurisdiction but have different numerical limits and legal bases. NRC would have no authority to implement and enforce the more stringent State limit. NRC has not asserted Federal preemption that would preclude the State from implementing and enforcing its ground-water protection requirements at mill sites for non-radiological contaminants. State standards would be preempted only if in direct conflict with the Federal standards.

Comment: Only one commenter addressed the cost/benefit information in the notice and that comment was

Federal Register / Vol. 52, No. 219 / Friday, November 13, 1987 / Rules and Regulations 43557

limited to a legal view that the analysis was not required.

Response: The Commission agrees that no analysis was required and so stated in the proposed rule.

V. Comments on specific Proposed Modifications to Appendix A of 10 CFR Part 40

Introduction

Definitions of 14 terms were proposed as additions to the Introduction. Comments were received on four of the definitions: Aquifer, existing portion, ground water, and point of compliance.

Comments: Industry comments urged changes to clarify that temporary aquifers from impoundment seepage should not be considered "aquifers" and that a beneficial use criterion be applied to "ground water."

Response: The proposed definitions of "aquifer" and "ground water" were quoted verbatim from 40 CFR 260.10. The comments on "aquifer" and "ground water" are addressing the same concepts because aquifers contain ground water.

The Commission agrees that a reasonable reading of the EPA secondary standard would allow flexibility in how the saturated zone from operations at existing sites is considered. The Commission agrees with commenters that the fundamental role of background levels of constituents (i.e., background is a baseline level that triggers action and background is one of the options for setting protective concentration limits for constituents) in the EPA standards contributes to a view that operationally created zones are not the aquifers of primary concern. This view is further supported by the prescriptive requirements EPA has adopted for its own implementation of the standards. For example, the EPA rule address how to obtain upgradient values and how to determine statistical increases over background. For new facilities or impoundments, the situation is clear that the uppermost aquifer of concern is the naturally occurring one.

The Commission does not agree with the commenters that the saturated zones can be dismissed generically. Decisions will be site specific and the Commission

notes that there may be circumstances where corrective actions involving these zones may be required under the provisions of paragraph 5D whether or not the zones are defined as aquifers.

The Commissions adding a sentence to the EPA definition of aquifer to address when the saturated zones are of sufficient direct concern to be designated as aquifers. The clarification is based on present and potential impacts from the zones and is consistent with EPA's consideration of the system of aquifers at the site in the definition of uppermost aquifer and EPA's.

"Groundwater Protection Strategy." August 1984 provided by EPA in the agency's comments on the ANPRM. It is also consistent with the EPA discussion of comments on the term "aquifer" in the July 26, 1982 rulemaking on 40 CFR Part 123, 260, 264, and 265 (47 FR 32289) in that near-surface soils saturated only as a result of disposal activity may not be the uppermost aquifer of concern.

Licensees would be expected to show that the zones are not and will not be interconnected to natural aquifers, that the zones do not and will not discharge to surface waters, and that the zone will remain confined to land under long-term government ownership and control. For example, licensees may be able to demonstrate that once the hydraulic head from the impoundment is gone, the zone will remain potentially yielding for only a short period of time and that the additional movement after closure will be limited. Under the regulatory scheme already in place for tailings (e.g., see Criterion 11 of Appendix A to 10 CFR Part 40), long term government ownership and control is authorized and expected. Institutional control of access to the area directly beneath the impoundments and associated features necessary to comply with the long-term stability portions of the standard could be reasonably expected to prevent access and use of water form these zones.

The Commission notes that this view of the saturated zones is related to the secondary standard and has no bearing on decisions concerning the primary standard. The primary standard (use of impermeable liners) is intended to prevent the occurrence of such saturated zones.

Commenters also addressed the qualitative test of an aquifer yielding a "significant amount" of water, but the Commission has concluded, as did EPA (e.g., see 47 FR 32289; July 26, 1982), that a quantitative definition is a regional decision and sometimes even a site specific decision. This aspect of the definition remains unchanged. The Commission is also adding a cross reference to the definition of aquifer in the definition of "ground water".

Comment: An industry commenter objected to the September 30, 1983 date in the definition of "existing portion" based on the legal view that NRC could not include a retroactive date.

Response: The Commission has consistently held that the standards in 40 CFR Part 192 were effective for NRC and Agreement State licensees on their effective date of December 6, 1983. Thus licensees were bound by the September date whether so stated in NRC's regulations or not; therefore, the date is not retroactive.

Comment: One commenter suggested that NRC develop more stringent requirements for "point of compliance" than those imposed by EPA's full suite of SWDA regulations. For example, designation of a horizontal plane in the unsaturated zone under the impoundment rather than EPA's uppermost aquifer and a location that provides at least two years of plume travel time before the plume would reach the site boundary were suggested.

Response: No definition for "point of compliance: was imposed by 40 CFR Part 192. The proposed definition was included in order to fully reflect 40 CFR 264.92, which was imposed. The objective of the point of compliance is described in paragraph 5B(1) being added to Appendix A of 10 CFR Part 40. The Commission considers any additional requirements to be outside the scope of this nondiscretionary rulemaking. The Commission notes that an existing provision in NRC rules in 10 CFR Part 40 is related to the commenter's concern. This existing provision that requires a leakage detection system under synthetic liners to detect major failures is being designated as 5E(1) by this action.

Criterion 5

Paragraph 5A

Comments: Comments were received only on paragraphs 5A(1) AND (3). One commenter objected to the exemption from an impermeable liner because contaminated soils would be allowed and the contamination would eventually migrate. A general recommendation was made that impoundments be designed with treatment systems to deal with liner failure. Industry repeated views that EPA primary design standard does not reflect a reasonable balancing of costs and benefits or provide sufficient site specific flexibility to meet Congressional intent and it exceeds EPA's authority.

Industry argued the merits of clay liners over synthetic ones and urged the addition of realistic flexibility to approve clay liners. One commenter suggested that the Commission use its authority to establish levels below which regulation is required (i.e., de minimis levels) to accommodate clay liners and provide relief from the absolute language for alternatives findings. Addition of a liner exemption if

wastes will not enter an aquifer or reach surface water because of local site conditions and revisions of the primary standard to a goal aimed at preventing only "significant" migration were suggested. One commenter suggested an editorial reference in 5A(1) to the exemption in 5A(3).

Response: The language in paragraphs 5A(1)Ä(5) incorporate the text imposed by 40 CFR Part 192, not NRC's action.

The Commission agrees that a finding that residual contamination will not migrate to ground or surface water at any future time will be very difficult but has no basis to conclude that such a finding could not be made and defended. Addition or treatment system requirements for leaks would be discretionary and outside the scope of the action. As noted earlier, Appendix A already requires a leakage detection system under new synthetic liners.

Industry arguments on the merits of clay liners repeated comments made on the proposed EPA standards and rejected by EPA in its final rule. EPA acknowledged and discussed the pros and cons of synthetic liners and liners of natural materials (e.g., 48 FR 45931; October 7, 1983) and concluded that the disadvantages of synthetic liners were not sufficient to deviate from the SWDA requirements.

Use of de minimis findings to modify the text being incorporated would lead to substantive changes. The Commission considers that it has legal flexibility in implementation and enforcement of the standards to consider de minimis quantities but cannot substantively alter the standards to consider de minimis quantities but cannot substantively alter the standards themselves. This view is supported by EPA's indication that synthetic liners meet the intent of the standard of no migration into the liner even though migration into properly functioning liners made of these materials will occur at very slow rates during the operation and closure phases.

A generic exemption from liners if wastes will not enter an aquifer or reach surface water is not completely consistent with the EPA standards. NRC must find that the basic standard for granting exemptions is met on a site specific basis and consider the prescribed factors in making that finding. The suggested language is a simplified paraphrase of the basic EPA standard and unnecessary.

The suggested editorial cross reference is being made.

Paragraph 5B

Paragraph 5B consists of Paragraphs 5B (1)Ä(6) and comments were received on all paragraphs except 5B(4).

Comments: Industry commenters suggested editorial changes to Paragraph 5B(1) to clarify that the focus of protection is ground water that was naturally present before operations began.

Response: The editorial comments are in the nature of reinforcement of earlier comments on the definitions of "ground water" and "aquifer". The clarifying sentences being added to the definitions of these terms address the issue of when the seepage from an impoundment would be considered an aquifer for purposes of Appendix A of 10 CFR Part 40 and no additional changes are needed. On its own volition, the Commission is also clarifying the last sentence of 5B(1) to indicate that the intended purpose of adjusting the point of compliance in the center of the flow of contaminated ground water based upon developed data and site information as to the flow of ground water or contaminants.

Comments: Paragraph 5B(2) outlines the three definitional tests form 40 CFR Part 264 that a constituent must meet in order to qualify as a hazardous constituent for which protective concentration limits must be set. One commenter emphasized that efficient implementation of the definitional scheme in 5B(2) requires serious consideration of the test to determine what is reasonably expected to be in or derived from the byproduct material and that licensees should not have to monitor for all the constituents listed in proposed Criterion 13.

Response: The Commission agrees that reasonable implementation of 5B(2) requires serious consideration of what is reasonably expected to be in or derived from tailings. The proposed rule was not intended to require that licensees monitor for the full list. Monitoring for the full list is contained in 40 CFR 264.97-264.99, sections not imposed by F.P.A. The Commission is clarifying 5B(2) to emphasize that all three tests must be met before a concentration limit must be set for a constituent.

Specifying which constituents a licensee will monitor for will be a site-specific decision. A reasonable approach to developing a site-specific list for monitoring at an existing site might involve the following steps:

(1) Use information on the constituents such as that contained in EPA's proposed rule (51 FR 26632: July 24,1986) and final rule (52 FR 259-42; July 9, 1987) to eliminate constituents that are unstable in water or not amenable to standard assay.

(2) Consider indicator for families or groups of compounds on the list.

(3) Carefully review administrative records ant data to determine how defensible this information is in defining which constituents may and may not be present and where the uncertainties are and,

(4) Sample existing tailings to establish which constituents are present.

The Commission recognizes that for new impoundments, administrative controls coupled with analyses of the ore can provide an effective means of controlling and identifying which constituents are being added to the new impoundment.

NRC is conducting an impoundment liquids sampling program. Results to date confirm the general consensus that many of the listed constituents are not present in the sampled impoundments. NRC's experience may be useful to licensees in developing sampling programs and it will facilitate review of licensee programs and results. NRC's program suggests that impoundment sampling is a feasible option for a licensee to pursue to help address which constituents could be expected to be in or derived from existing impoundments.

Comments: Two commenters suggested deleting Paragraph 5B(3) which incorporates the provision to exclude detected constituents if they will not pose a significant present or potential hazard to human health or the environment. One objected to any unregulated pollution by a known hazardous material and one read the incorporated language as giving NRC authority exceeding the EPA intended for itself. The commenter stated that EPA use of this exemption is limited to exclusion from monitoring only. An environmental commenter disagreed with NRC's legal view that EPA exceeded its jurisdiction in 40 CFR Part 192 by requiring site-specific concurrences before any exemption of constituents is final. Industry commenters supported NRC's view. Both positions claimed support in the legislative history statutory language. One commenter disagreed with the Commission's view that EPA concurrence is a procedural rather than substantive matter. Industry commenters suggested consideration of natural geochemical processes in exempting constituents and establishing background values for constituents.

Response: The imposed standards include the provision to exclude detected constituents and NRC must

include it for completeness. The second commenter's of the provision is

flawed. Being absent from the tailings leachate is sufficient basis to exclude the constituent from any further consideration. Evaluation of factors such as ground water flow or health risks would not be needed if the constituent is not present. In the Commission's view, paragraph 5B(3) is a health and safety finding based on a pathway analysis that a constituent known to be in the wastes will not poses a short or long term even though it has been released to the uppermost aquifer and therefore no restrictions on its concentration are needed. The Commission is clarifying this point.

Commenters offered no substantive new legal arguments or considerations that were not considered in the Commission's earlier decision on the matter of EPA site-specific concurrences. See the final rule notice for the first step conformance published October 16, 1985 [50 FR 41853 and 41861]. As the Commission said in the prior rulemaking:

The Commission historically has had the authority and responsibility to regulate the activities of persons licensed under the Atomic Energy Act of 1954, as amended. Consistent with that authority and in accordance with Section 84c of that Act, the Commission has the discretion to review and approve site specific alternatives to standards promulgate by the Commission and by the Administrator of the Environmental Protection Agency. In the exercise of this authority. Section 84c does not require the Commission to obtain the concurrence of the Administrator in any site specific alternative which satisfies Commission requirements for the level of protection for public health, safety, and the environment from radiological and nonradiological hazards at uranium mill tailing sites. As an example, the Commission need not seek concurrence of the Administrator in case-by-case determinations of alternative concentration limits and delisting of hazardous constituents for specific sites.

In the October rulemaking, the Commission also noted that site specific concurrences contradict the procedural prohibition on EPA's issuance of a permit in section 275b(2) of the Atomic Energy Act.

For both delisting including constituents under paragraph 5B(3) and approving alternate concentration limits under paragraph 5B(6), the Commission is bound by the basic EPA standard that no substantial present or potential hazard to the public health or the environmental be posed. The Commission is also required to consider a comprehensive list of factors relating to protection of ground and surface water as part of the secondary standard. 40 CFR Part 192 also added requirements for constituent levels to be as low as is reasonably achievable and for all practicable corrective actions to be taken. Delisting and approval of alternate concentration limits are a normal and integral part of the implementation and enforcement of the substantive EPA secondary standard. EPA concurrences would merely be a review of the adequacy of NRC's

site specific implementation of the overall secondary standard in licensing decisions.

Commenter's concerns over NRC's application of section 84c of the AEA and independent action of delisting constituents and alternate concentration limits may stem from a misconception of what the Commission understands alternative site specific standards to be. The Commission would expect a licensee, first, to attempt to meet all regulations and standards as issued. If site-specific circumstances would make compliance physically impossible, technically impracticable, or excessively costly in relation to the benefits to be gained from the reduction of risks, then alternatives should be considered. The alternatives proposed should meet the objectives of the established standards so that the NRC can find that the alternatives provide a level of health and environmental protection equivalent to the extent practicable, to promulgated standards. The Commission does not view the provision as an open invitation to disregard the standards and set new goals, and believes that the language in section 84c requiring and equivalency or more stringent finding precludes such a view. To illustrate, assume the standard has a numerical value of X but meeting X instead of Y would require extraordinary expense or might compromise the soundness of the impoundment structure or safety monitoring features. The alternative limited to be proposed may be Y for the specific circumstances, NRC must find that Y provides equivalent protection, to the extent practicable, to X.

The commenters rejected the Commission's position that site specific concurrences detract from the Commission's statutory discretion under section 84c of the AEA and that the matter is primarily a procedural one. Nevertheless, the Commission continues to believe the rejection of EPA site specific concurrences in the correct legal position. Therefore, the Commission is issuing the final rule without any provision for EPA concurrence in delisting constituents or alternate concentration limits.

The Commission agrees that determining background is difficult at many existing sites. However, it is not completely clear what the difficulties have do with excluding constituents and haw natural geochemical processes are to be considered. In the Commission's view, background measurement problems are not a sufficient basis to exclude constituents when the levels present are clearly higher than background in the area and may pose a significant hazard.

Comments: Two commenters objected to the flexibility provided in paragraph 5B(5) for unspecific site-specific alternate concentration limits that may exceed background or drinking water levels. Views on the legality or deleting the provision for EPA concurrences were repeated. Industry expressed concern about the lack of definition of "background". The Department of Interior commented that neither the preamble nor the text make it clear when alternate

concentrations are to be applied (e.g., only when background levels are not available).

Response: Suggestions to delete the provision for alternate concentration limits are comments on 40 CFR Part 192. The option for alternate concentration limits was legally imposed and NRC must include this substantive provision. From a technical point of view, the alternate concentration limit option is crucial to practical implementation. As stated earlier, the Commission agrees that determining background may be difficult but commenters offered no generic solutions to the difficulty. Decisions on background values will have to be made on site specific basis.

The EPA secondary standard in 5B(5) is a site-specific choice of three equal options: Background, referenced drinking water limits [see 5C], or alternate concentration limits. However, if the licensee chooses to pursue the alternate concentration limit option then the licensee must expend the resources to collect the information and do the analyses to support an alternate concentration. The licensee may choose the basic background or drinking water options as the more economic or timely. The licensee would not have to address health and environmental risk with the basis choices because these are conceded to involve acceptable risks. The Commission would be required to independently review the proposed alternate limit and the supporting rationale and agree or set a different limit based on the information available. Alternate concentration limits may be requested without regard to the

availability of background values. The Commission is clarifying this point.

Comments: Comments were divided on the language in paragraph 58B(6) referring to contaminate levels being as low as reasonably achievable (ALARA). One commenter objected to ALARA based on a view that ALARA levels might still pose significant hazards. The provision was considered unnecessary and inappropriately applying ALARA to nonradiological constituents. EPA expressed a contrary view that ALARA was not clearly applied to the nonradiological constituents as EPA intended. EPA also viewed the proposed language as giving the ALARA finding primacy over the factors to be considered.

Response: The issue of how and when ALARA was intended to apply is not completely clear from the preamble to EPA's final rules (48 FR 45941-2; October 7, 1983) or from the text of the rule itself. However, there is no apparent reason to conclude that any distinction was being made between radioactive and

nonradioactive constituents and the Commission accepts EPA's views. The Commission's proposed rule include ALARA for emphasis but there was no intent to have ALARA dominate the factors to be considered or the fundamental standard that the "constituent will not pose a substantial present or potential hazard to human health or the environmental as long as the alternate concentration is not exceeded. "The Commission is clarifying this points.

Comments: Industry and EPA addressed the development of a generic methodology for evaluating alternate concentration limits. Industry asked for comment opportunity. EPA noted that the two agencies had agreed that the development and use of such guidance would provide a means of addressing the differing agency views on the legality of EPA site specific concurrences and suggested that the final regulations recognize that the agencies are committed to such a course of action.

Response: Industry's request to review and guidance documents or joint methodologies before they are finalized has merit and NRC usually issues guidance documents for public comment.

Then the proposed rule was published, both agencies expected that publication of a comprehensive EPA SWDA guidance document on alternate concentration limits was imminent and staffs were optimistic that the methodology approach would work. However, completion and publication of the SWDA document was delayed until July 1987. (See 52 FR 27579; July 22 1987.) Major changes made to the earlier draft which formed the basis for NRC's expectations. The major changes flowed in part from additional legislation (e.g., 1984 amendments to RCRA and Section 121 of the Superfund Amendments and Reauthorization Act of 1986) and other Congressional direction (e.g., a letter to EPA Administrator Lee M. Thomas dated March 4, 1986 from John Dingell and 10 other members of Congress). The changes appear to make the SWDA guidance impracticable for uranium recovery and inconsistent with the SWDA standards as they stood when EPA incorporated them into 40 CFR Part 192 (EPA incorporated the SWDA standards as codified on January 1, 1983). For the reasons given above, NRC may well need to develop a new methodology clearly unique for tailings. Nonetheless, the Commission will continue to consult with EPA on any methodology developed and still favors resolving the EPA concurrence role called for in 40 CFR Part 192 by adoption of a mutually acceptable generic methodology. As discussed earlier, the Commission is issuing the final rule without any provision for EPA concurrences is delisting constituents or alternate concentration limits.

Paragraph 5C

Comment: The only comment on this paragraph, which incorporated the drinking water values imposed with supplemental radioactivity limits added, was a suggestion to develop numerical limits for the constituents of concern at

tailing sites.

Response: As the commenter conceded, the proposed rule action fulfilled the conformance requirement. Development of limits is outside the scope of this action.

Paragraph 5D

Comments: Two commenters recommended that corrective action begin before hazardous constituents reach the point of compliance and objected to the potential for an 18-month delay before action begins. One commenter suggested that licensees be required to submit corrective action plan in advance for automatic activation to reduce delays. A two year time limit for corrective actions was also suggested. Industry suggested clarifying that licensees do not have to cleanup naturally occurring contamination or contamination from someone else's operations. Industry views the corrective action programs to be aimed at cleaning up the preoperational aquifers, not the seepage zones from leaking impoundments.

Response: The concerns for corrective action before reaching the aquifer are similar to concerns discussed earlier on the definition of "point of compliance". The Comments on allowing up to 18 months to began corrective action program is a rejection of EPA's change from a 12 month limit in the proposed 40 CFR Part 192 to 18 months in the final rule. The Commission has no basis to overrule this EPA decision.

Commenter concerns may stem from a misconception that not actions have been taken or will be taken except in response to the EPA standards. However, NRC licensees had extensive monitorizing programs in place and many licensees were conducting mitigative actions prior to the EPA standards.

The comment that corrective action plans be submitted in advance does have merit, particularly for new sites. However, advance plans would be conceptual and may need modification to adequately address the actual circumstances of the failure event. Decision on this matter will be made on a site-specific basis. The suggestion to impose a two year time limit for corrective action programs before requiring removal to new impoundments presumes that short-term solutions would always be the test choice. The Commission views the nature and duration to corrective action programs to be a very site specific matter and is unable to defend a discretionary requirement for a two year limit.

Concern that licensees not have to cleanup natural or third party contamination is valid is this type of distinction can be made. The difficulty is establishing background would appear to be partially responsible for this comment. The Commission is concerned that arguments over mining seepage versus

tailings seepage or similar uncertainties not prevent an orderly implementation of the EPA standards. The concern that the corrective action program be directed at the natural aquifers is addressed in part by the clarifying addition to the definition of "aquifer." Because these decisions are so site specific, the Commission is concerned that attempts to further clarify the matter in the rule may create more problems than they would solve.

Paragraphs 5E-H

Comments: The only purpose in including these paragraphs in the proposed rule was to designate them as 5E-H for consistency. Industry commenters suggested that 5H be

deleted based on the legal view that NRC does not have regulatory authority over ore storage at mills.

Response: Since paragraph 5H was unaffected by the EPA standards being incorporated, substantive change to delete is outside the scope of this action. However, the Commission views the provision is valid.

Criterion 6

Comments: The proposed addition to Criterion 6 incorporated the imposed nonradiological hazard closure requirement. One commenter suggested application of the closure requirement to radioactive constituents and properties. One noted that the closure standard and the design and operational liner standard may conflict and suggested that the closure requirements have priority. Editorial suggestions addressed the lack of definition or quantification of the term "threat" and the lack of clarity resulting from the use of the three parallel terms "control, minimize or eliminate."

Response: The language in 40 CFR part 192(b)(1) clearly identifies 40 CFR 264.111 as the closure standard for nonradiological hazards. The addition of the radiological constituents and properties to Criteria 5C and 13 assures that these aspects must be addressed in corrective action plans when they are of concern. No additional changes are needed. The comment on potential conflict is more of an observation and reflect concerns with the primary design standard.

The editorial suggestions are not consistent with the language imposed. The

suggested change appear to be less protective and do not provide quantification or use alternate terms there are defined in EPA's standards. Consequently they are not being made.

Criterion 7

Comments: The proposed addition to Criterion 7 incorporated the requirements for a detection monitoring program and other information requirements needed to comply with the secondary ground-water standard. One commenter viewed 40 CFR 264.98 as legally imposed and suggested the addition detailed prescriptive monitoring requirements. An industry commenter urged the Commission to direct staff to consider site specific alternatives for monitoring proposed by licensees.

Response: The sentence viewed as imposing 40 CFR 264.98 is: "Detection monitoring programs required under 264.92 shall be completed within one (1) year of promulgation." While imposition of 264.98 is one way this language could be read, the Commission believes that a better reading is that detection monitoring should be established within one year. This view is supported by the fact that the imposed standards in 264.92 are dependant on site specific data, except for the drinking water values, so that the reference to 264.98 only to serves to illustrate that a monitoring program is necessary to implement 264.92. This view is also supported by EPA's listing in the preamble to the October 7, 1983 rule of 264.98 as a section NRC is to address, but no one EPA expressly incorporated in whole or in part. The issue of discretionary rule has already been discussed a number of times.

The comment addressing staff consideration of alternatives does not require any change in the proposed rule. The provision to consider licensee alternatives in accordance with section 84c of the AEA was incorporated in NRC's October 16, 1985 final rule.

A pervasive theme in the comments is the erroneous view that routine monitoring of all Criterion 13 constituents is required. The Commission is clarifying that monitoring for constituents will be determined on a site specific basis .

Criterion 13

Comments: Commenters agreed that the proposed Criterion 13 contains many constituents that will not be of concern at tailings sites and urged NRC to taylor the list for application to tailings. One commenter suggested adding additional constituents such as sulfates chlorides, total dissolves solids, and pH because they degrade water quality.

Response: Although the Commission agrees that the list in Criterion 13

includes many constituents that will likely never be of concerns, shortening the list is outside the scope of this action. If the list is shortened, it would have to be based on one of two findings. One that the constituents is not inherently hazardous which is not at issue here. The second is that the constituents would never be present in uranium and thorium byproduct material and wastes or the impoundments. Making the second finding would include uncertainties that presently available information does not address (e.g., that ore bodies would not contain new constituents, that new solvents will not be introduced, and that operational or decommissioning wastes will not introduce new constituents). The clarifying language being added to emphasize that licensees are not expected to routinely monitor for all the constituents should reduce concerns that prompted the comments.

The Commission does not believe that the addition of the suggested parameters is technically appropriate. These parameters may only affect the potability of ground water and not qualify as hazardous. Although the list imposed by EPA does not include nitrates, the EPA drinking water regulations for community water supplies include a limit for nitrates. The Commission considers it prudent to add a reference to NRC's authority to add constituents on a site specific basis to allow for a more aggressive approach for contaminants such as nitrates and is doing so. Also, the indicator parameters suggested for addition are likely candidates for NRC attention under the National Environmental Policy Act (NEPA) and many State ground-water programs address these parameters.

VI. Agency Concurrences

The action covered in this notice is undertaken pursuant sections 84a(2) and 275(3) of the AEA and reflects requirements already imposed by EPA, and already subject to implementation and enforcement by NRC under section 275d of the AEA. The Commission considers it inappropriate to consider this rulemaking as requiring EPA concurrence under section 84a(3) of the AEA. Section 84a(3) of the AEA requires NRC to assure that by-product material is managed in a manner that "conforms to general requirements established by the Commission, with the concurrence of the Administrator, which are, to the maximum extent practicable, at least comparable to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulated by the Administrator under the Solid Waste Disposal Act, as amended. "No discretionary general requirements pursuant to section 84a(3) are being issued.

VII. Impact of the Amendments

A. Finding of No Significant Environmental Impact

The Commission has determined under NEPA and the Commission's regulations in 10

CFR Part 51 that NRC's incorporation of the EPA standards by this action is not a major Federal Action significantly affecting the quality of the environment and therefore an environmental impact statement is not required. The significant Federal action was the promulgation by EPA of its regulations on September 30, 1983.

In issuing these additional modifications to its regulations in Appendix A to 10 CFR Part 40, the Commission is completing the action to

conform them to the EPA standards. The purpose of these changes is to clarify previously existing language in promulgated EPA standards and incorporate mandatory requirements into NRC's regulations. This action by the Commission is a consequence of previous actions taken by the Congress and the EPA, and is legally required by sections 84a(2) and 275f(3) of the Atomic Energy Act of 1954, as amended.

Commission action in this case is essentially nondiscretionary in nature, and EPA is viewed as the lead agency. For purposes of environmental analysis, this action rests upon existing environmental and other impact evaluations prepared by EPA in the following documents: (1) "Final Environmental Impact Statement for Standards for the Control of Byproduct Materials from Uranium Ore Processing (40 CFR Part 192)." Volumes 1 and 2 EPA 520/1-83-008-1 and 2, September 1983. 1/ (2) "Regulatory Impact Analysis of Final Environmental Standards for Uranium Mill Tailings at Active Sites." EPA 520/1-83-010, September 1983, and (3) Supplementary Information, Interim Final Rulemaking for 40 CFR Parts 122, 260, 264 and 265, "Hazardous Waste Management System; Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; and EPA Administered Permit Programs?" published July 26, 1962 (47 FR 32274). NRC also prepared an overview of the potential actions that might be required of NRC and Agreement state licensees by the EPA standards entitled, "Summary of the Waste Management Programs at Uranium Recovery Facilities as They Relate to the 40 CFR Part 192 Standards." NUREG/CR-4403. 2/

B. Impacts Presented in Proposed Rule

the Commission published an overview and update of the impacts on the environment ad uranium and thorium milling industry associated with the ground-water protection standards when they were proposed for incorporation (51 FR 24703-24709; July 8, 1986). The discussion also addressed in general terms

the economic and other factors that would be addressed in a comprehensive Regulatory Flexibility Analysis if one was required by this action to meet the requirements of the Regulatory Flexibility Act. The summary information was not intended to be a strict cost/benefit analysis or a technical justification for the standards. It generally related economic cost to the benefit expected from compliance with the standard. The summary information was also intended to help the reader more fully understand the nature and potential impacts of the proposed action.

VIII. Paperwork Reduction Act Statement

This final rule amends information collection requirements that are subject to Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). These requirements were approved by the Office of Management and Budget under approval number 3150-0020.

IX. Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission certifies that this rule will not have a significant economic impact upon a substantial number of small entities. Therefore, a Regulatory Flexibility Analysis has not been prepared. The basis for this finding includes the nature of the licensees as well as the nondiscretionary nature of this action. Of the 27 licensed uranium mills that have produced tailings, only one qualifies as small entity.

List of Subjects in 10 CFR Part 40

Government contracts, Hazardous materials-transportation, Nuclear materials, Penalty, Reporting and recordkeeping requirements, Source material, and Uranium.

X. Modifications

Under the Atomic energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, 5 U.S.C. 553, and the Uranium Mill Tailings Radiation control Act of 1978, as amended, the NRC is issuing the following amendments to 10 CFR Part 40.

PART 40ÄÄDOMESTIC LICENSING OF SOURCE MATERIAL

1. The authority citation for Part 40 continues to read as follows:

Authority: Secs. 62, 63, 64, 65, 81, 161, 182, 183, 186, 68 Stat. 932, 933, 935, 948, 953, 954, 955, as amended, secs. 11e(2), 83, 84, Pub. L. 95-604, 92

Stat. 3033, as amended, 3039, sec. 234,83 Stat. 444, as amended (42 U.S.C. 2014(e)(2), 2092, 2093, 2094, 2095, 2111, 2113, 2114, 2201, 2232, 2233, 2236, 282); sects. 274. Pub. L. 86-373 Stat. 688 (42 U.S.C. 2021); secs. 201, as amended 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846). Sec. 275, 92 Stat. 3021, as amended by Pub L. 97-415, 96 Stat. 2067 (42 U.S.C. 2022).

Section 40.7 also issued under Pub. L. 95-601, sec. 10,92 Stat. 2951 (42 U.S.C. 5851). Section 40.31 (g) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 40.46 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 40.71 also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

For the purpose of se. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); 40.3, 40.25(d)(1)-(3), 4065 (a)-(d), 40.41 (b) and (c), 40.46, 40.51 (a) and (c), and 40.63 are issued under sec. 161 b. 68 Stat. 948, as amended, (42 U.S.C. 2201(b)); and 40.25 (c) and (d)(3) and (4), 4026(c)(2), 40.35(e), 40.42, 40.61, 40.62, 40.64 and 40.65 are issued under sec. 161o, 66 Stat. 950, as amended (42 U.S.C.2201(o)).

Appendix A to Part 40 is amended as follows:

Appendix A to Part 40ÄÄCriteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Waters Produced by the Extraction or Concentration of Source Material From Ores Processed Primarily for Their Source Material Content

2. Introduction to Appendix A is amended by adding the following text at the end of the Introduction:

Introduction. * * *

The following definitions apply to the specified terms as used in the Appendix:

"Aquifer" means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs. Any saturated zone created by uranium or thorium recovery operations would not be considered an aquifer unless the zone is or potentially is (1) hydraulically interconnected to a natural aquifer, (2) capable of discharge to surface water, or (3) reasonably accessible because of migration beyond the vertical projection of the boundary of the land transferred for long-term government ownership and care in accordance with Criterion 11 of this appendix.

"Closure" means the activities following operations to decontaminate and decommission the buildings and site used to produce byproduct materials and

reclaim the tailings and/or waste disposal area.

"Closure plan" means the commission approved plant to accomplish closure.

"Compliance period" begins when the Commission sets secondary ground-water protection standards and ends when the owner or operator's license is terminated and the site is transferred to the State or Federal agency for long-term care.

"Dike" means an embankment or ridge of either natural or man-made materials used to

1/ Single copies of the Final Environmental Impact and the Regulatory Impact Analysis may be purchased from the National Technical Information Service. U.S. Department of Commerce. 5285 Part Royal Road, Springfield, VA 22161. A copy of each document is also available for inspection and/or copying in NRC's Public Document Room. 1717 H Street NW. Washington, DC 20555.

2/ Copies of NUREG/CRÄÄ4403 and NUREG 0706 may e purchased through the U.S. Government Printing Office by calling (202) 275-2000 or by writing to the U.S. Government Printing Office P.O. Box 37082. Washington, DC 20813-7082. Copies may also be purchased from the National Technical Information Service, U.S. Department of commerce, 5285 Port Royal, Springfield, VA 22161. Copies are available for inspection and/or copying for a fee in the NRC Public Document Room, 1717 H Street NW, Washington, DC 20555

prevent the movement of liquids, sludges, solids or other materials.

"Disposal area" means the area containing byproduct materials to which the requirements of Criterion 6 apply.

"Existing portion" means that land surface area of an existing surface impoundment on which significant quantities of uranium or thorium byproduct materials had been placed prior to September 30, 1983.

"Ground water" means water below the land surface in a zone of saturation. For purposes of this appendix, ground water is the water contained within an aquifer as defined above.

"Leachate" means any liquid, including any suspended or dissolved components in the liquid, that has percolated through or drained from the byproduct material.

"Licensed site" means the area contained within the boundary of a location under the control of persons generating or storing byproduct materials under a Commission license.

"Liner" means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment which restricts the downward or lateral escape of byproduct material, hazardous constituents, or leachate.

"Point of compliance" is the site specific location in the uppermost aquifer where the ground-water protection standard must be met.

"Surface impoundment" means a natural topographic depression, man-made excavation, or diked are, which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well.

"Uppermost aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

3. Criterion 5 is revised to read as follows:

Criterion 5ÄÄCriteria 5A-5D and new Criterion 13 incorporate the basic ground-water protection standards imposed by the Environmental Protection Agency in 40 CFR Part 192, Subparts D and E (48 FR 45926; October 7, 1983) which apply during operations and prior to the end of closure. Ground-Water monitoring to comply with these standards is required by Criterion 7A.

5A(1)ÄÄThe primary ground-water protection standard is a design standard for surface impoundments used to manage uranium and thorium byproduct material. Unless exempted under paragraph 5A(3) of this criterion, surface impoundments (except for an existing portion) must have a liner that is designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil, ground water, or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner (but not into the adjacent subsurface soil, ground water, or surface water) during the active life of the facility, provided that impoundment closure includes removal or decontamination of all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate. For impoundments that will be closed with the liner material left in place, the liner must be constructed of materials that can prevent wastes from migrating

into the liner during the active life of the facility.

5A(2)ÄÄThe liner required by paragraph 5a(1) above must beÄÄ

(a) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation:

(b) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(c) Installed to cover all surrounding earth likely to be in contact with the wastes or leachate.

5A(3)ÄÄThe applicant or licensee will be exempted from the requirements of paragraph 5A(1) of this criterion if the Commission finds, based on a demonstration by the applicant or licensee, that alternate design and operating practices, including the closure plan, together with site characteristics will prevent the migration of any hazardous constituents into ground water or surface water at nay future time. In deciding whether to grant a exemption, the Commission will considerÄÄ

(a) The nature and quantity of the wastes;

(b) The proposed alternate design and operation;

(c) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the impoundment and ground water or surface water, and

(d) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

5A(4)ÄÄA surface impoundment must be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations, overfilling, wind and wave actions, rainfall, or run-on; from malfunctions of level controllers, alarms, and other equipment; and from human error.

5A(5)ÄÄWhen dikes are used to form the surface impoundment, the dikes must be designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it

must not be presumed that the liner system will function without leakage during the active life of the impoundment.

5B(1)ÄÄUranium and thorium byproduct materials must be managed to conform to the following secondary ground-water protection standard: Hazardous constituents entering the ground water from a licensed site must not exceed the specified concentration limits in the uppermost aquifer beyond the point of compliance during the compliance period. Hazardous constituents are those constituents identified by the Commission pursuant to paragraph 5B(2) of this criterion. Specified concentration limits are those limits established by the Commission as indicated in paragraph 5B(5) of this criterion. The Commission will also establish the point of compliance ad compliance period on a site specific basis through license conditions and orders. The objective in selecting the point of compliance is to provide the earliest practicable warning that the impoundment is releasing hazardous constituent to the ground water. The point of compliance must be selected to provide prompt indication of ground-water contamination on the hydraulically downgradient edge of the disposal area. The Commission shall identify hazardous constituents, establish concentration limits, set the compliance period, and may adjust the point of compliance if needed to accord with developed data and site information as to the flow of ground water or contaminants, when the detection monitoring established under Criterion 7A indicates leakage of hazardous constituents from the disposal area.

5B(2)ÄÄA constituent becomes a hazardous constituent subject to paragraph 5B(5) only when the constituent meets all three of the following tests:

(a) The constituent is reasonably expected to be in or derived from the by product material in the disposal area:

(b) The constituent has been detected in the ground water in the uppermost aquifer, and

(c) The constituent is listed in Criterion 13 of this appendix.

5B(3)ÄÄEven when constituent meet all three tests in paragraph 5B(2) of this criterion, the Commission may exclude a detected constituent from the set of hazardous constituents on a site specific basis if it finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to exclude constituents the Commission will consider the following:

(a) Potential adverse effects on ground-water quality, consideringÄÄ

(i) The physical and chemical characteristics of the waste in the licensed

site, including its potential for migration;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity of ground water and the direction of ground-water flow;

(iv) The proximity and withdrawal rates of ground-water users;

(v) The current and future uses of ground water in the area;

(vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;

(vii) The potential for health risks caused by human exposure to waste constituents;

(viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(ix) The persistence and permanence of the potential adverse effects

43564 Federal Register / Vol. 52. No. 219 / Friday, November 13, 1987 / Rules and Regulations

(b) Potential adverse effects on hydraulically connected surface water quality, consideringÄÄ

(i) The volume and physical and chemical characteristics of the waste in the licensed site:

(ii) The hydrogeolical characteristics of the facility and surrounding land;

(iii) The quality and quality of ground water, and the direction of ground-water flow;

(iv) The patterns of rainfall in the region;

(v) The proximity of the licensed site to surface waters;

(vi) The current and future uses of surface waters in the area and any water quality standards established for those surface water;

(vii) The existing quality of surface water, including other sources of

contamination and the cumulative impact on surface-water quality;

(viii) The potential for health risks caused by human exposure to waste constituents;

(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituent; and

(x) The persistence and permanence of the potential adverse effects.

5B(4)ÄÄIn making any determinations under paragraphs 5B(3) and 5B(6) of this criterion about the use of ground water in the area around the facility, the Commission will consider any identification of underground sources of drinking water and exempted aquifers made by the Environmental Protection Agency.

5B(5)ÄÄAt the point of compliance, the concentration of a hazardous constituent must not exceedÄÄ

(a) The Commission approved background concentration of that constituent in the ground water;

(b) The respective value given in the table in paragraph 5C if the constituent is listed in the table and if the background level of the constituent is below the value listed; or

(c) An alternate concentration limit established by the Commission.

5B(6)ÄÄConceptually, background concentrations pose no incremental hazards and the drinking water limits in paragraph 5C state acceptable hazards but these two options may not be practicably achievable at a specific site. Alternate concentration limits that present no significant hazard may be proposed by licensees for Commission consideration. Licensees must provide the basis for any proposed limits including consideration of practicable corrective actions, that limits are as low as reasonably achievable, and information on the factors the Commission must consider. The Commission will establish a site specific alternate concentration limit for a hazardous constituent as provided in paragraph 5b(5) of this criterion if it finds that the proposed limit is as low as reasonably achievable, after considering practicable corrective actions, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In making the present and potential hazard finding, the Commission will consider the following factors:

(a) Potential adverse effects an ground-water quality, consideringÄÄ

(i) The physical and chemical Characteristics of the waste in the licensed site including its potential for migration;

(ii) The hydrageological characteristics of the facility and surrounding land;

(iii) The quantity of ground water and the direction of ground water and the direction of ground-water flow;

(iv) The proximity and withdrawal rates of ground-water users:

(v) The current and future uses of ground water in the area;

(vi) The existing quality of ground water including other sources of contamination and their cumulative impact on the ground-water quality:

(vii) The potential for health risks caused by human exposure to waste constituents;

(viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(ix) The persistence and permanence of the potential adverse effects.

(b) Potential adverse effects on hydraulically-connected surface water quality, consideringÄÄ

(i) The volume and physical and chemical characteristics of the waste in the licensed site;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity and quality of ground water, and the direction of ground water flow;

(iv) The patterns of rainfall in the region;

(v) The proximity of the licensed site to surface waters;

(vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

(vii) The existing quality of surface water including other sources of contamination and the cumulative impact on surface water quality;

(viii) The potential for health risks caused by human exposure to waste

constituents;

(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(x) The persistence and permanence of the potential adverse effects.

5CÄÄMAXIMUM VALUES FOR GROUND-WATER PROTECTION

Constituent or property	Maximum concentration
Milligrams per liter:	
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin (1,2,3,4,10,10-hexachloro-1, 7-expoxy-1,4,4a,5,6,7,8,9a-octahydro-1,4-endo, endo-5,8-dimethano naphthalene)	0.0002

5CÄÄMAXIMUM VALUES FOR GROUND-WATER PROTECTIONÄÄContinued

Constituent or property	Maximum concentration
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2,2-bis (p-methoxyphenylethane)	0.1
Toxaphene (C10H10C6, Technical chlorinated camphene 67-69 percent chlorine)	0.005

2,4-D (2,4-Dichlorophenoxyacetic acid).....	0.1	
2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid).....		0.01
Picocuries per liter:		
Combine-228 radium-226 and radium-228.....	5	
Gross alpha-particle activity (excluding radon and uranium when producing uranium byproduct material or radon and thorium when producing thorium byproduct material).....		15

5DÄÄIf the ground-water protection standards established under paragraph 5B(1) of this criterion are exceeded at a licensed site, a corrective action program must be put into operation as soon as is practicable, and in no event later than eighteen (18) months after the Commission finds that the standards have been exceeded. The licensee shall submit the proposed corrective action program and supporting rationale for Commission approval prior to putting the program into operation, unless otherwise directed by the Commission. The objective of the program is to return hazardous constituent concentration levels in ground water to the concentration limits set as standards. The licensee's proposed program must address removing the hazardous constituents that have entered the ground water at the point of compliance or treating them in place. The program must also address removing or treating in place any hazardous constituents that exceed concentration limits in the ground water between the point of compliance and the downgradient facility property boundary. The licensee shall continue corrective action measures to the extent necessary to achieve and maintain compliance with the ground-water protection standard. The Commission will determine when the licensee may terminate to corrective action measures based on data from the ground-water monitoring program and other information that provide reasonable assurance that the ground-water protection standard will not be exceeded.

5EÄÄIn developing and conducting ground-water protection programs, applicants and licensees shall also consider the following:

(1) Installation of bottom liners (Where synthetic liners are used, a leakage detection system must be installed immediately below the liner to ensure major failures am detected

if they occur. This is in addition to ground-water monitor program conducted as provided in criterion 7. Where clay liners ar proposed or relatively thin, in-situ clay soil are to be relied upon for seepage control test must be conducted with representative tailings solutions and clay materials to confirm that no significant deterioration of permeability or stability properties will occur with continuous exposure of clay to tailings solutions. Tests must be run for a sufficient period of time to reveal any effects if they are going to occur (in some cases deterioration has been observed to occur rather rapidly after about nine months of exposure)).

(2) Mill process designs which provide the maximum practicable recycle of solutions and conservation of water to reduce the net input of liquid to tailings impoundment.

(3) Dewatering of tailings by process devices and/or in-situ drainage systems (At new sites, tailings must be dewatered by a drainage system installed at the bottom of the impoundment to lower the pheartic surface and reduce the driving head of seepage, unless tests show tailings are not amenable to such a system. Where in-situ dewatering is to be conducted, the impoundment bottom must be graded to assure that the drains area la low point. The drains must be protected by suitable filter materials to assure that drains remain free running. The drainage system must also be adequately sized to assure good drainage).

(4) Neutralization to promote immobilization of hazardous constituents.

5FÄÄWhere ground-water impacts are occurring at an existing site due to seepage, action must be taken to alleviate conditions that lead to excessive seepage impacts and restore ground-water quality. The specific seepage control and ground-water protection method, or combination methods, to be used must be worked out on a site-specific basis. Technical specifications must be prepared to control installation of seepage control systems. A quality assurance testing and inspection program, which includes supervision by qualified engineer or scientist, must be established to assure the specifications are met.

5GÄÄIn support of a tailings disposal system proposal, the applicant/operator shall supply information concerning the following:

(1) The chemical and radioactive characteristics of the waste solutions.

(2) The characteristics of the underlying soil and geologic formations

particularly as they will control transport of contaminants and solutions. This includes detailed information concerning extent thickness, uniformity, shape, and orientation of underlying strata. Hydraulic gradients and conductivities of the various formations must be gathered from borings and field survey methods taken within the proposed impoundment area and in surrounding areas where contaminants might migrate to ground water. The information gathered on boreholes must include both geologic and geophysical logs in sufficient number and degree of sophistication to allow determining significant discontinuities, fractures, and channeled deposits of high hydraulic conductivity. If field survey methods are used, they should be in addition to and calibrated with borehole logging. Hydrologic parameters such as permeability may no be determined on the basis of laboratory analysis of samples alone; a sufficient amount of field testing (e.g., pump tests) must be conducted to assure actual field properties are adequately understood. testing must be conducted to allow estimating chemi-sorption attenuation properties of underlying soil and rock

(3) Location, extent quality, capacity and current uses of any ground water at and near the site.

5HÄÄSteps must be taken during stockpiling of ore to minimize penetration of radionuclides into underlying soils; suitable methods include lining and/or compaction of ore storage areas.

4. Criterion 6 is amended by adding the following new paragraph at the end of Criterion 6:

Criterion 6ÄÄ * * *

The licensee shall also address the nonradiological hazards associated with the wastes in planning and implementing closure. The licensee shall ensure that disposal areas are closed in manner that minimizes the need for further maintenance. To the extent necessary to prevent threats to human health and the environment, the licensee shall control minimize, or eliminate post-closure escape of nonradiological hazardous constituents leachate, contaminated rainwater, or waste decomposition products the ground or surface waters or to atmosphere.

5. Criterion 7 is amended by adding the following new paragraph at the end of Criterion 7:

Criterion 7:

7AÄÄThe licensee shall establish a detection monitoring program needed for the Commission to set the site-specific ground-water protection standards in

paragraph 5B(1) of this appendix. For all monitoring under this paragraph the licensee or applicant will propose for Commission approval as license conditions which constituents are to monitored on a site specific basis. A detection monitoring program has two purposes. The initial purpose of the program is to detect leakage of hazardous constituents from the disposal area so that the need to set ground-water protection standard in monitored. If leakage is detect, the second purpose of the programs to generate data and information needed for the Commission to establish the standard under Criterion 5B. The data and information must provide a sufficient basis to identify those hazardous conditions which require concentration limit standards an to enable the Commission to set the limits for those constituent and the compliance period. They may also need to provide the basis for adjustments to the point of compliance. For licensees in effect September 30, 1983, the detection monitoring programs must have been in place by October 1, 1984. For licenses issued after September 30, 1983 the detection monitoring programs must be in place when specified by the Commission in orders or license conditions. Once ground-water protection standards have been established pursuant to paragraph 5B(1), the licensee shall establish and implement a compliance monitoring program. The purpose of the compliance monitoring program is to determine that the hazardous constituent concentration in ground water continue to comply with the standards set by the Commission. In conjunction with a corrective action program, the licensee shall establish and implement a corrective action monitoring program. The purpose of the corrective action monitoring program is to demonstrate the effectiveness of the corrective action s. Any paragraph may be based on existing monitoring programs to the extent the existing programs can meet the stated objective for the program.

6. Add the following new heading an a new Criterion 13 at the end of Appendix a to red as follows:

V. Hazardous Constituents

Criterion 13ÄÄSecondary ground-water protection standards required by Criterion 5 of this appendix are concentration limits for individual hazardous constituents. The following list of constituents identifies the constituents of which standard must be set and complied with if the specific constituent is reasonably expected to be in or derive from the byproduct material and has been detect in ground water. For proposes of this appendix the property of gross alpha activity will be treated as if it is a hazardous constituent. Thus, when setting standards under paragraph 5B(5) of criterion 5, the commission will also set a limit for gross alpha activity. The Commission does no consider the following list imposed by 40 CFR part 192 to be exhaustive and may determine other constituents to be hazardous on a case-by-case basis, independent of those specified by the U.S. Environmental protection Agency in Part 192

Hazardous Constituents

Acetonitrile (Ethanenitrile)

Aceptphenone (Ethaanone, 1-phenyl) 3-(alpha-Actonylbenzyl)-4-hydroxycoumanrin and salts (Warfarin)

2-Acetylaminofluorene (Acetamide.N-(9H-flouren-2-yl)-)

Acetyl chloride (Ethanoyl chloride)

1-Acetyl-2-thiourea (Acetamide.N-(aminothioxomethyl)-)

Acrolein (2-Propenal)

Acrylamide (2-Propensamide)

Acrylonitrile (2-Propenenitrile)

Aflatoxins

Aldrin (1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a,8b,-bexahydro-endo, exo-1,4,:5,8-Dimethanonaphthalene)

Allyl alcohol (2-Propen-1-ol)

Aluminum phosphide

4-Aminobiphenyl (1.1-Biphenyl)-4-amine)

6-Amino-1.1a,2,*,8a,8b-hexahidro-(hydroxymethyl)-8a-methoxy-5-methyl-carbamate azirino(2',3':3,4)pyrrolo(1,2-a)indloe-4,7-dione, (ester)(Mitomycin C) (Azirino(2'3':3,4)pyronolo91,2-a)indole-4.7-dione,5-amino-8-(((amino-

caboryllohyl) 1.1a.2.8.8a.8b-hexahydro-8a methoxy-5-mehty-)

5-(Aminomethyl)-3-isoxazolol0(392H)-Aminopyridine(4-Pyridinamine)

Amitrole(1H-1,2,4-Triazol-3-amine)

Aniline (Benzenamine)

Antimony and compounds, N.O.S. 3/

Aramite (Sulfurous acid. 2-chloroethyl-.2-[4-(1.1-dimethylethyl)phenoxy]-1-methylethyl ester)

Arsenic and copounds. N.O.S. 3/

Arsenic acid (Orthoarsenic acid)

Arsenic pentoxide (Arsenic (V) oxide)

Arsenic trioxide (Arsenic (III) oxide)

Auromine (Benzenamine, 4.4- carbonimidoylbes(N.N-Dimethyl-monohydrochloride)

Azaserine (L-Serine, diazoacetate(ester))

Barium and compouunds. N.O.S. 3/

Barium cyanide

Benz(c) acridine (3.4-Benzacridine)

Benz(a)antharacene (1.2-Benzanthrcene)

Benzene (Cyclohexatriene)

Benzearsonic acid (Arsonic acid. phenyl-)

Benzene, civhloromethyl- (Benzal chloride)

Benzenethiol (Thiophenol)

Benzidine ([1.1-Bephenyl]-4.4 diamine)

Benzo(b)fluoranthene (2.3Benzofluoranthene)

Benzo(j)flouranthene (7.8 Benzofluoranthene)

Benzo(a)pyrene (3.4-Benzopyrene)

p-Benzoquinone (1.4-Cyclohexadienedione)

Benzotrichloride (Benzene, trichloromethyl)

Benzyl chloride-(Benzene, (chloromenthyl)-)

Berlium and compounds. N.O.S. 3/

Bis(2-chloroethoxy)methane(Ethane, 1,1-oxybis(2-chloro-))

N.N-Bis(2-chloroethyl)-2-naphthylmine (Chlornaphazine)

Bis(2-chloroisopropyl) ether (Propane, 2.2-oxybis(2-chloro-))

Bis(chloromethyl) ether (Methane oxybis(chloro-))

Bis (2-ethylhexy) phthalate(1.2Benzenedicarboxylic acid. bis(2-ethylhexyl) ester)

Bromoacetone (2-Propanone. 1-bromo-)

Bromomethane (Methyl bromide)

4-Bromophenyl phenyl ether (Benzene. bromo-4-phenoxy-)

Brucine (Strychinidin-10-one. 2,3-imethoxy-)

2-Butanone peroxide (Methyl ethyl ketone, peroxide)

Butyl benzyl phthalate (1,2 Benzenedicarboxylic acid, butyl phenylmethy ester)

2-sec-Butyl-4,6-dinitrophenol (DNBP) (Phenol,2,4-dinitro-6-(1-metthylpropyl)-)

Cadimium and compounds, N.O.S. 3/

Calcium chromate (Chromic acid, calcium salt)

Carbon disulfide (Carbon fisulfide)

Carbon oxyfluoride (Carbon fluoride)

Chloral (Acetaldehyde, trichloro-)

Chlorambucil (Butanoic acid, 4-(bis(2-chloroethyl)amino)benzene-)

Chlordane (alpha and gamma ismers) (4,7- Methanoidan 1,2,4,5,6,7,8,8-octachloro-3.1.7.7a-tetrahydro-)(alpha and gamma isomers)

Chlorinated benzenes N.O.S. 3/

Chlorinated ethane. N.O.S. 3/

Chlorinated fluorocarbons. N.O.S. 3/

Chlorinated naphthalene. N.O.S. 3/

Chlorinated phenol. N.O.S. 3/

Chloroacetaldehyde (Acetaldehyde, chloro-)

Chloroalkyl ethers, N.O.S. 3/

p-Choloroaniline (Benzenamine, 4-chloro-)

Chlorobenzene(Benzene, chloro-)

Chlorobenzilate (Benzeneaetic acid, 4-chloro-alpha-(-4chlorophenyl)-alphahydroxy-ethyl ester)

p-Chloro-2,3-epoxypropane (Oxirane,2-(chloromethyl)-)

2-Chloroethyl vinyl ether (Ethene, (2-chloroethoxy)-)

Chlorolform(Methane, trichloro-)

Chloromethane (Mthyl chloride)

Choromethyl methyl ether (Methane, chloromethoxy-)

2-Chloronaphthalene (Naphthalene,betachloro-)

2-(o-Chlorophenyl)thiourea(Thiourea.(2-chlorophenyl)-)

3-Chloropropionitrile (Propanenetrile , 3-chloro-)

Chromium and compaounds. N.O.S. 3/

Chrysene (1,2-Benzphenathrene)

Citrus red No. 2(2-Naphthol, 1-[(,5-demethoxyphenyl)azo]-)

-Coal tars

Copper cyanide

Creosote(Creosote, Wood)

Cresols (Cresylic acid)(Phenol,methyl-)

Crotonaldhyede (2-Butenal)

Cynides (soluble salts and compxes), N.O.S. 3/

Cyanogen (Ethanedinitrile)

Cyanogen bromide (Bromine cyanide)

Cyanogen chliorde (chlorine cyanide)

Cyacasin (beta-D-Glucopyranoside, (methyl-ONN azoxy) methyl-)

2-Cyclonhexyl-4,6-dinitrophenol(Phenol, 2 cyclohexyl -4,6 dinitro-)

Cyclophosphamide (2H-1,3,2- Oxazaphosphorine, (bis(w-chloroethyl) amino)-tetrahydro-2-oxide)

Daunomycin (5,12-Naphthacenedione,(8s-cis)-*-acetyl-10-((3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl)oxy)-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-)

DDD (Dichlorodiphenyldicloroethane) (Ethane, 1.1-dichloro-2,2-bis(p-chloropheneyl)-)

DDE (Ethylene 1.1-dichloro-2,2-bis(4-chlorphenyl)-)

DDT (Dichlorodiphenyltichloroethane) (Ethane,1,1,1-trichloro-2,2 bis (pchlorophenyl)-)

Diallate (S-(2,3-dichloroallyl) siisopropylticoarbamate)

Dibenz(a,h) acridine (1,2,5,6,-Dibenzacriene)

Dibenz(a,j) acridine (1,2,7,8-Dibenzacridine)

Dibenz(a,h) antrharcen (1,2,5,6-Dibenzanthracene)

7H-Dibenzo(c,g) carbazole (3,4,5,6,- Dibenzcarbazole)

Dibenzo(a,e) pyrene (1,2,4,5- Dibenzpyrene)

Dibenzo(a,h) pyrene (1,2,5,6- Dibenzpyrene)

Dibenzo(a,i) pyrene (1,2,7,8- Dibenzpyrene)

1.2-Dibromo-3-choloropropnae (Propane, 1,2-dibromo-3-chloro-)

1.2-Dibromoethane (Ethylene dibromade)

Dibromomethane (Mehtylene bromide)

Di-n-butyl phthalate (1,2-Benzenedicarboxylic acid, dibutyl ester)

o-Dichlorobenzene (benzene, 1,2-dichloro-)

m-Dichlorobenzene (benzene, 1,3-dichloro-)

p-Dichlorobenzene (benzene, 1,4-dichloro-)

Dichlorobenzene, N.O.S. 3/ (Benzene, dichloro-, N.O.S. 3/)

3,3-Dichlorobenzidine ({1,1-Biphenyl}-4,4-diamine, 3,3-dichloro-)

1,4-Dichloro-2-butene (2-Butene, 1,4-dichloro-)

Dichlorodifluoromethane (Mehtane, dichlorodifluoro-)

1,1-Dichloroethane (Ethylidene dichloride)

1,2-Dichloroethane (Ethylene dichloride)

trans-1,2-Dichloroethene (1,2- Dichloroethylene)

Dichloroethylene, N.O.S. 3/ (Ethene, dichloro- N.O.S. 3/)

1,1-Dichloroethylene (Ethene, 1,1-dichloro-)

Dichloromethane (Methylene chloride)

2,4-Dichlorophenol (Phenol, 2,4-dichloro-)

2,6-Dichlorophenol (Phenol, 2,6-dichloro-)

2,4-Dichlorophenoxyacetic acid (2,4-D), salts and esters (Acetic acid, 2,4-

dichlorophenoxy-, salts and esters

Dichlorophenylarsine (Phenyl dichloroarsine)

Dichloropropane, N.O.S. 3/ (Propane, dichloro-, N.O.S. 3/)

1,2-Dichloropropane (Propylene dichloride)

Dichloropropanol, N.O.S. 3/ (Propanol, dichloro-, N.O.S. 3/)

Dichloropropene, N.O.S. 3/ (Propene, dichloro-, N.O.S. 3/)

1,3-Dichloropropene (1-Propene, 1,3-dichloro-)

Dieldin (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octa-hydro-endo, exo-1,4:5,8-Dimethanonaphthalene)

1,2:3,4-Diepoxybutane (2,2-Bioxirane)

Diethylarsine (Arsine, diethyl-)

N,N-Diethylhydrazine (Hydrazine, 1,2-diethyl)

O,O-Diethyl S-methyl ester of phosphorodithioic acid (Phosphorodithioic acid, O,O-diethyl S-methyl ester)

O,O-Diethylphosphoric acid, O-p-nitrophenyl ester (Phosphoric acid, diethyl p-nitrophenyl ester)

Diethyl phthalate (1,2-Benzenedicarboxylic acid, diethyl ester)

O,O-Diethyl O-2-pyrazinyl phosphorothioate (Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester)

Diethylstilbesterol (4,4-Stilbenediol,alpha,alpha-diethyl, bis(dihydrogen phosphate, (E)-)

Dihydrosafrole (Benzene, 1,2-methylenedioxy-4-propyl-)

3,4-Dihydroxy-alpha-(methylamino)methyl benzyl alcohol (1,2-Benezenediol, 4-(1-hydroxy-2-)methylamino)ethyl)-)

Dilsopropylfluorophosphate (DFP)(Phosphorofluoridic acid, bis(1-methylethyl) ester)

Dimethoate (Phosphorodithioic acid, O,O-dimethyl S-{2-(methylamino)-2-oxoethyl} ester)

3,3-Dimethoxybenzidine ({1,1-Biphenyl}-4,4-diamine, 3-3-dimethoxy-)

p-Dimethylaminoazobenzene (Benzenamine, N,N-dimethyl-4-(phenylazo)-)

7,12-Dimethylbenz(a)anthracene(1,2-Benzanthracene, 7,12-dimethyl-)

ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
3/ The abbreaiation N.O.S. (not otherwise specified) signifies those members of the general clase no specifically listed by name in this list.

3.3-Dimethylbenzidine ((1.1-Biphenyl)-4.4-diamine, 3.3-dimethyl-)

Dimethylcarbamoyl chloride (Carbamoy(chloride,demethyl-)

1.1-Dimethylhydrazine (Hydrazine, 1.1-dimethyl-)

1.2-Dimethylhydrazine (Hydrazine, 1.2-dimethyl-)

3.3-Dimethyl-1-(methylthio)-2-butanone. O-((methylamino)carbonyl)oxime ((Thiofanox)

alpha,alpha-Dimethylphenethylamine (Ethanamine, 1.1-dimethyl-2-phenyl-)

2.4-Dimethylphenol (Phenol, 2.4-dimethyl-)

Dimethyl phthalate (1.2-Benzenedicarboxilic acid, dimethyl ester)

Dimethyl sulface (sulfuric acid, dimethyl ester)

Dinitrobenzene. N.O.S 3/ (Benzene, dinotro-,N.O.S 3/)

4.6-Dinitro-o-cresol and salts (Phenol, 2.4-dinitro-6-methyl-,and salts)

2.4-Dinitrophenol (Phenol,2.4.-dinitro-)

2.4-Dinitrophenol (Benzene, 1-methyl-2.4-dinitro-)

2.6-Dinitrotoluene (Benzene, 1-methyl-2.6-dinitro-)

Di-n-octyl phthalate (1.2-Benzenedicarboxylic acid, diocty ester)

1.4-Dioxane (1.4-Diethylene oxide)

Diphenylamine (Benzenamine, N-phenyl-)

1.2-Diphenylhydrazine (Hydrazine, 1.2-diphenyl-)

Di-n-propylnitrosamine (N-Nitroso-di-n-propylamine)

Disulfoton (O.O-diethyl S-(2-(ethylthio)ethyl) phosphorodithioate)

2.4-Dithiobiure (Thioimidodicarbonic diamide)

Endosulfan (5-Norbornene, 2.3-dimethanol, 1,4,5,6,7,7-hexachloro-, cyclic sulfite)

Endrin and metabolites (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,endo-1,4:5,8-dimethanonaphthalene, and metabolites)

Ethyl carbamate (Urethan)(Carbamic acid, ethyl ester)

Ethyl cyanide (propanenitrile)

Ethylenebisdithiocarbamic acid, salts and esters (1.2-Ethanediyl-biscarbamodithioic acid, salts and esters)

Ethyleneimine (Aziridine)

Ethylene oxide (Oxirane)

Ethylenethioures (2-Imidazolidinethione)

Ethyl methacrylate (2-Propenoic acid, 2-methyl-,ethyl ester)

Ethyl methanesulfonate (Methanesulfonic acid, ethyl ester)

Fluorantheme (Benzo(j,k)fluorene)

Fluorine

2-Fluoroacetamide (Acetamide, 2-fluoro-)

Fluoroacetic acid, sodium salt (Acetic acid, fluoro-, sodium salt)

Formaldehyde (Methylene oxide)

Formic acid (Methanoic acid)

Glycidylaldehyde (1-Propanol-2.3-epoxy)

Flalomethane. N.O.S 3/

Heptachlor (4,7-Methano-1H-idene. 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-)

Heptachlor epoxide (alpha, beta, and gamma isomers)(4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-2.3-expoy-03a,4,7,7-tetrahydro-, alpha, beta, and gamma isomers)

Hexachlorobenzene (Benzene, hezachloro-)

Hexachlorobutadiene (1,3-Butadiene, 1,1,2,3,4,4-hexachloro-)

Hexachlorocyclohexane (all isomers) (Lindane and isomers)

Hexachlorocyclopentadiene (1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-)

Hexachloroethane (Ethane, 1,1,1,2,2,2,-hexachoro-)

1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo,endo-dimethanonaphthalene(Hexachlorohexa-hydro-endo,endodimethanonaphthalene)

Hexachlorophene (2,2-Methylenebis(3,4,6-trichlorophenol)

Hexachloropropone (1-Propone, 1,1,2,3,3,3-hexachloro-)

Hexaethyl tetraphosphate (Tetraphosphoric acid, hexaethyl ester)

Hydrazine (Diamine)

Hydrocyanic acid (Hydrogen cyanide)

Hydrofluoric acid (Hydrogen fluoride)

Hydrogen sulfide (Sulfur hydride)

Hydroxydimethylarsine oxide (Cacodylic acid)

Indeno (1,2,3-cd)pyrene (1,10-(1,2-phenyulene)pyrene)

Iodomethane (Methyliodide)

Iron dextran (Ferric dextran)

Isocyanic acid, methyl ester (Methyl isocyanate)

Isobutyl alcohol (1-Propano, 2-methyl-)

Isosafrole (Benzene, 1,2-methylenedioxy-4-allyl-)

Kepone (Decachlorooctahydro-1,3,4-Methano-2H-cyclobuta(cd)pentalen-2-one)

Lasiocarpine (2-Butenoic acid, e-methyl-,7-((2,3,-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy)methyl)-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester)

Lead and compounds. N.O.S 3/

Lead acetate (Acetic acid, lead salt)

Lead subacetate (Lead, bis(acetato-O)tetrahydroxytri-)

Maleic anhydride (2,5-Furandione)

Maleic hydrazide (1,2-Dihydro-3,6-pyridazinedione)

Malononitrile (Propanedinitrile)

Melphatan (Alanine, 3-(p-bis(2-cholroethyl)amino phenyl-,L-)

Mercury fulminate (Fulminic acid, mercury salt)

Mercury and compounds, N.O.S 3/

Methacrylonitrile (2-Propenenitrile, 2-methyl-)

Methanethiol (Thiomethanol)

Methapyrilene (Pyrudubem 2-((2-dimethylamino)ethyl)-2-thenylamino-)

Metholmil (Acetimidic acid, N-((methylcarbamoyl)oxy)thio-methyl ester)

Methoxychlor (Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)-)

2-Methylaziridine (1,2-Propylenimine)

3-Methylcholanthrene (Benz(j)aceanthrylene. 1,2-dihydro-3-methyl-)

Methyl chlorocarbonate (Carbonochloridic acid, methyl ester)

4,4-Methylenebis(2-chloroaniline)(Benzenamine. 4.4-methylenebis-(2-chloro-)

Methyl ethyl ketone (MEK)(2-Butanone)

Methyl hydrazine (Hydrazine, methyl-)

2-Methyllactonitrile (Propanenitrile, 2-methyl-,methyl ester)

Methyl methanesulfonate (Methanesulfonic acid, methyl ester)

2-Methyl-2-(methylthio)propionaldehyde-o-(methylcarbonyl)oxime (Propanal,w-methyl-2-(methylthio)-o-((methylamino)carbonyl(oxime)

N-Methyl-N-nitro-N-nitrosaguanidine(Guanidine,N-nitroso-N-methyl-N-nitro-)

Methyl parathion (O.O-dimethyl O-(4-nitrophenyl)phosphorothioate)

Methylthiouracil (4-(H-Pyrimidinone, 2,3,-dehydro-6-methyl-2-thioxo-)

Molybdenum and compounds. N.O.S 3/

Mustard gas (sulfide,bis(2-chloroethyl)-)

Naphthalene

1,4-Naphthoquinone (1,4-Naphthalenedione)

1-Naphthylamine (alpha-Naphthylamine)

2-Naphthylamine (beta-Naphthylamine)

1-Naphtyl-2-thiourea (Thiourea,1-naphthalenyl-)

Nickel and compounds, N.O.S 3/

Nickel carbonyl (Nickel tetracarbonyl)

Nickel cyanide (Nickel (II)cyanide)

Nicotine and salts (Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts)

Nitric oxide (Nitrogen(II) oxide) p-Nitroaniline (Benzenamine,4-nitro-)

Nitrobenzine (Benzene, nitro-)

Nitrogen dioxide (Nitrogen (IV) oxide)

Nitrogen mustard and hydrochloride salt(Ethanamine, 2-chloro-,N-(2-chloroethyl)-N-methyl-, and hydrochloride salt)

Nitrogen mustard N-Oxide and hydrochloride salt (Ethanamine, 2-chloro-,N-(2-chloroethyl)-N-methyl-, and hydrochloride salt)

Nitroglycerine (1,2,3-Propanetriol, trinitrate)

4-Nitrophenol (Phenol,4-nitro-)

4-Nitroquinoline-1-oxide(Quinoline, 4-nitro-1-oxide-)

Nitrosamine, N.O.S 3/

N-Nitrosodi-n-butylamine (1-Butanamine, N-butyl-N-nitroso-)

N-Nitrosodiethanolamine (Ethanol.2.2.-(nitrosoimino)bis-)

N-Nitrosodiethylamine (Ethanamine, N-ethyl-N-nitroso-)

N-Nitrosodimethylamine (Dimethylnitrosamine)

N-Nitroso_N-ethylurea (Carbamide, N-ethyl-N-nitroso)

N-Nitrosomethylethylamine (Ethanamine, N-methyl-N-nitroso-)

N-Nitroso-N-methylurea (Carbamide, N-methyl-N-nitroso-)

N-Niroso-N-methylurethane (Carbamic acid, methylnitroso-, ethyl ester)

N-Nitrosomethylvinylamine (Ethenamine, N-methyl-N-nitroso-)

N-Nitrosomorpholine (Morpholine, N-nitroso-)

N-Nitrosonornicotine (Nornicotine, N-nitroso-)

N-Nitrosopiperidine (Pyridine, hexahydro-, N-nitroso-)

Nitrosopyrrolidine (Pyrrole, tetrahydro-, N-nitroso-)

N-Nitrososarcosine (Sarcosine, N-nitroso-)

5-Nitro-o-toluidine (Benzenamine, 2-methyl-5-nitro-)

Octamethylpyrophosphoramide (Diphosphoramide, octamethyl-)

Osmium tetroxide (Osmium (VIII)oxide) 7-Oxabicyclo (2.2.1)heptane-2.3-dicarboxylic acid (Endothal)

Paradehyde (1, 3, 5-Triomine, 2, 4, 6-trimethyl-)

Parathion (Phosphorothione acid, O.O-diethyl O-[p-nitrophenyl]ester)

Pentachlorobenzene (Benzene, pentachloro-)

Pentachloroethane (Ethane,pentachloro-)

Pentachloron:trobenezene (PCNB) (Benzene, pentachioromtro-)

Pentachlorophenol (Phenol, pentachloro-)

Phenacetin (Acetanade, N-(-4-ethoxyphenyl)-)

Phenol (benezen, hydroxy-)

Phenylenediamine (Benzenediamine)

Phenylmercary acetate (Mercury, acetatophenyl-)

N-Phenylthioarea (Thiourea, phenyl-)

Phosgene (Carbonyl chloride)

Phosphine (Hydrogen phosphide)

Phosphorodithioic acid, O.O-diethyl S-[(ethylthiolmethyl]ester(phosphate)

Phosphorothioic acid, O.O-dimethyl O-[p-

((dimethylaminoisulphonylpheyl]ester(Famphur)

Phthalic acid esters, N.O.S. 3/ (Benzene, a, 2-dicarboxylic acid, esters, N.O.S. 3/)

Phthalic anhydride (1, 2-Benzenedicarboxylic acid anhydride)

2-Picoline (Pyridine, 2-methyl-)

Polychlorinated biphenyl, N.O.S. 3/

Potassium cyanide

Potassium silver cyanide (Argentate(1-)dicyano-potassium)

Pronamide (3, 5-Dichloro-N-(1, 1-dimethyl-2-propynyl_benzamide)

1,2-Propane suitone (1, 2-Oxathiolane, 2, 2-dioxide)

n-Propylamine (1-Propamine)

Propylthiouracil (Undecamethylenediamine, N, N-bis(2-chlorobenzyl-), dihydrochloride)

2-Propyn-1-ol (proppargyl alcohol)

Pyridine

Redium-226 and 228

Reserpine (Yohimban-16-carboxylic acid, 11.17-dimethoxy-18-(3, 4, 5-trimethoxybenzoil[oxy]-methyl ester)

Resorcinol (1,2-Benzenediol)

Saccharin and salis (1, 2-Benzoisothiazolin-3-one, 1,1-dioxide, and salts)

Safrole (benzene, 1, 2-methylenedioxy-4-allyl-)

Selenious acid (Selenium dioxide)

Selenium and compounds, N.O.S. 3/

Selenium sulfide (Sulfor selenide)

Selenourea (Carbomimidoselenoic acid)

Silver and compounds, N.O.S. 3/

Silver cyanide

Sodium cyanide

Streptozotocin (D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-)

Stronium sulfide

Struchnine and salts (Strychnidin-10-one, and salts)

1, 2, 4, 5-Tetrachlorobenzene (Benzene, 1, 2, 4, 5-tetrachloro-)

2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin(TCDD) (Dibenzo-p-dioxin, 2, 3, 7, 8-tetrachloro-)

Tetrachloroethane, N.O.S 3/ (Ethane, tetrachloro-,N.O.S. 3/)

1, 1.1, 2-Tetrachloroethane (Ethane, 1, 1.1, 2-tetrachloro-)

1, 1.2, 2-Tetrachloroethane (Ethane, 1, 1.2. 2-tetrachloro-)

Tetrachloroethane (Ethane, 1,1.2,2-tetrachloro-)

Tetrachloromethane (Carbon tetrachloride)

2, 3, 4, 6-Tetrachlorophenol (phenol, 2, 3, 4, 6-tetrachloro-)

Tetraethyldithiopyrophosphophane (Dithiopyrophosphane acid tetraethyl, ester)

Tetraethyl lead (Phambane, tetraethyl-)

Tetraethylpyrophosphate (Pyrophosphane acide, tetraethyl ester)

Tetranitromethane (Methane, tetranitro-)

Thallium and compounds, N.O.S. 3/

Thallic oxide (Thallium (III) oxide)

Thallium (I) acetate (Asenic acid, thallium (I) salt]

Thallium (I) carbonate (Carbonic acid, dithallium (I) salt)

Thallium (I) chloride

Thallium (I) bitrate (Nitratic acid, thallium (I) salt)

Thallium selenite

Thallium (I) sulfate (Sulfuric, acid, thallium (I) salt)

Thioacetamide (Ethanethioamide)

Thiosemicarbazide (Hyfrazinecarbothioamide)

Thiourea (Carbamide thio-)

Thiouram (Bis(dimethylthiocarbamoyl) disulfide)

Throrium and compounds, N.O.S. 3/ when producing thorium byproduct material

Tolaene (Benzene, Methyl-)

Toluenediamine (Diaminotoluene)

o-Toluidine hydrochloride (Benezamine, 2-methyl-, hydrochloride)

Tolylene diisocyanate (Benzene, 1, 3-ddisocyanatomehtyl-)

Toxaphene (Camphene, octachloro-)

Tribromomethane (Bromoform)

1, 2, 4-Trichlorobenzene (Benzene, 1, 2, 4-thrichloro)

1, 1.1-Trichloroethane (Methyl chloroform)

1.1, 2-Trichloroethane (Ethane, 1.1, 2-trichloro-)

Trichloroethene (Trichloroethylene)

Trichloromethanethiol (Methanethiol, trichloro-)

Trichloromonofluoromethane (Methane, trichlorofluoro-)

2, 4, 5-Trichlorophenol (Phenol, 2, 4, 5-trichloro-)

2, 4, 6-Trichlorophenol (Phenol, 2, 4, 6-trichloro-)

2, 4, 5-Trichlorophenoxyacetic acid (2, 4, 5-T) (Acetic acid, 2, 4, 5-trichlorophenoxy-)

2, 4, 5-Trichlorophenoxypropionic acid (2, 4, 5-TP) (Silvex)(Propionic acid, 2-(2, 4, 5-trichlorophenoxy-)

Trichloropropane, N.O.S. 3/ (Propane, trichloro-, N.O.S. 3/)

1, 2, 3-Trichloropropane (Propane, 1, 2, 3-trichloro)

O.O.O-Triethyl phosphorothioate (phosphorothioic acid, O.O.O-trietyl ester)sym-

Trinitrobenzene (Benzene, 1, 3, 5-trinitro-)

Tris (1-azridinyl) phosphine sulfide (Phosphine sulfide, tris(1-aziridinyl-)

Tris(2, 3-dibromopropyl)phosphate (1-Propanol, 2, 3-dibromo-, phosphate)

Trypan blue (2, 7-Naphthalenedisulfonic acid, 3, 3'-(3, 3'-dimethyl (1, 1'-biphenyl)- 4, 4'diyl)bis(azo))bis(5-amino-1-hydroxy-, tetrasodium salt)

Uracil mustard (Uracil 5-[bis(2-chloroethyl)amino]-)

Uranium and compounds, N.O.S. 3/

Vanadic acid, ammonium salt (ammonium vanadate)

Vanadium pentoxide (Vanadium [V] oxide)

Vinyl chloride (Ethene, chloro-)

Zinc cyanide

Zinc phosphide

Dated at Washington, DC this 6th day of November, 1987.

For the Nuclear Regulatory Commission

Samuel J. Chilk
Secretary of the Commission

[FR Doc. 87-26169 Filed 11-12-87; 8:45 am]

BILLING CODE 7590-01-M

NATIONAL CREDIT UNION ADMINISTRATION

12 CFR Parts 701, 703, and 721

Organization and operations of Federal Credit Unions; Investments and Deposit Activities; and Federal Credit Union Insurance and Group Purchasing Activities

AGENCY: National Credit Union Administration

ACTION: Final rule

SUMMARY: The NCUA Board is amending its regulation on Investments in and Loans to Credit Union Service Organizations (12 CFR 701.27), FCU Ownership of Fixed Assets (12 CGR 701.36), Investment and Deposit Activities (12 CFR Part 703), and Federal Credit Union Insurance and Group Purchasing Activities (12 CFR Part 721 by revising the definition of the term "immediate family members" as used therein and by adding a new definition "senior management employee," to those provisions of its regulations. The purpose of these changes is to narrow the scope of the rules as they relate to potential conflicts of interest by credit union directors, committee members, employees, and their immediate family members. This will provide consistency between these regulations and the final rule on member business loans issued by the NCUA Board on April 9, 1987.

EFFECTIVE DATE: December 16, 1987.

ADDRESS: National Credit Union Administration, 1776 G Street NW., Washington, DC 20456.

FOR FURTHER INFORMATION CONTACT: James J. Engel, Deputy General Counsel, at the above address or telephone: (202) 357-1030.

SUPPLEMENTARY INFORMATION:

Background

On July 15, 1987, the NCUA Board issued proposed rules relating to conflicts of interest by credit union directors, committee members, employees, and their immediate family members. See, 52 FR 28274 (July 29, 1987). The rules were proposed to provide consistency between the final rule of member business loans

(April 9, 1987) and NCUA's rules for Federal credit unions on credit union service organizations (CUSO's); ownership of

ATTACHMENT 2

Section 84 of the Atomic Energy Act,
42 U.S.C. 2114

42 U.S.C. 2114. "Sec. 84. AUTHORITIES OF COMMISSION RESPECTING CERTAIN BYPRODUCT MATERIAL.-

42 U.S.C. 2014. "a. The Commission shall insure that the management of any byproduct material, as defined in section 11 e.(2), is carried out in such manner as-

"(1) the Commission deems appropriate to protect the public health and safety and the environment radiological and nonradiological hazards associated with the processing and with the possession and transfer of such material taking into account the risk to the public health, safety, and the environment, with due consideration of the economic costs and such other factors as the Commission determines to be appropriate," 73/

"(2) conforms with applicable general standards
Infra. promulgated by the Administration of the Environmental Protection Agency under section 275, and

"(3) conforms to general requirements established by the Commission, with the concurrence of the Administrator, which are, to the maximum extent practicable, at least comparable to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulated by the Administrator under the Solid Waste Disposal Act, as amended.

42 U.S.C. 6901 note Rule regulation or order. "b. In carrying out its authority under this section, the Commission is authorized toÄÄ

"(1) by rule, regulation, or order require persons, officers, or instrumentalities exempted from licensing

under section 81 of this Act to conduct monitoring,

ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
72/ Public Law 95-604 (92 Stat/ 3033)(1978), sec. 202(a), added sec. 83

73/ Public Law 97-415 (96 Stat/ 2067)(1983), sec. 22 added the language after "material".

ATTACHMENT 3

Section 275 of the Atomic Energy Act,
42 U.S.C. 2022

42 U.S.C. 2022. "Sec. 275. HEALTH AND ENVIRONMENTAL STANDARDS for URANIUM MILL TAILINGS.ÄÄ

"a. As soon as practicable, but not later than October 1, 1982, /218 the Administrator of the Environmental Protection Agency (hereinafter referred to in this section as the `Administrator') shall, by rule, promulgate standards of general application (including standards applicable to licenses under section 104(h) of the Uranium Mill Tailings Radiation Control Act of 1978) for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with residual radioactive materials (as defined in section 101 of the Uranium Mill Tailings Radiation Control Act of 1978) located at inactive uranium mill tailings sites and depository sites for such materials selected by the Secretary of Energy, pursuant to title I of the Uranium Mill Tailings Radiation control Act of 1978. Standards promulgated pursuant to this subsection shall, to the maximum extent practicable, be consistent with the requirements of the Solid Waste Disposal Act, as amended. In establishing such standards, the Administrator shall 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. 219/ The Administrator may periodically revise any standard promulgated pursuant to this subsection.

Rule.

"After October 1, 1982, if the Administrator has not promulgated standards in final form under this subsection, any action of the Secretary of Energy under title I of
42 U.S.C. 7911. the Uranium Mill Tailings Radiation Control Act of 1978 which is required to comply with, or be taken in accordance with, standards of the Administrator shall comply with, or be taken in accordance with, the standards proposed by the Administrator under this subsection until such time as the Administrator promulgates such standards in final form. 220/

(SEE ORIGINAL)

perform remedial work, and to comply with such other measures as it may deem necessary or desirable to protect health or to minimize danger to life or property, and in connection with the disposal or storage of such byproduct material; and 42 U.S.C. 2112

"(2) make such studies and inspections and to conduct such monitoring as may be necessary

Any violation by any person other than the United States or any officer or employee of the United States or a State of any rule, regulation, or order or licensing provision, of the Commission established under this section or section 83 shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 234. Nothing in this section affects any authority of the Commission under any other provisions of this Act. 74/ Civil penalty ***,p. 3033

"c. In the case of sites at which ores are processed primarily for their source material content or which are used for the disposal of byproduct material as defined in section 11 e. (2), a licensee may propose alternatives to specific requirements adopted and enforced by the Commission under this Act. Such alternative proposals may take into account local or regional conditions, including geology, topography, hydrology and meteorology. The Commission may treat such alternatives as 42 U.S.C. 2114

satisfying Commission requirements if the Commission determines that such alternatives will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health safety, and the environment from radiological and nonradiological hazards associated with such sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by standards and requirements adopted and enforced by the Commission for the same purpose and any final standards promulgated by the Administrator of the Environmental Protection Agency in accordance with section 275. 75/ 42 U.S.C. 2022

"CHAPTER 9. MILITARY APPLICATION OF ATOMIC ENERGY

"SEC. 91. AUTHORITY.ÄÄ Authority.
"a. The Commission is authorized to- 42 U.S.C.
"(1) conduct experiments and do research and sec. 2121.
development work in the military application of atomic energy; and

"(2) engage in the production of atomic weapons, or atomic weapon parts, except that such activities shall be carried on only to the extent that the express consent and direction of the President of the United States has been obtained, which consent and direction shall be obtained, which consent and direction shall be obtained at least once each year.

ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
74/ Public Law 95-604 (92 stat. 3039)(1978). sec. 205 (a) added sec.

75/ Public Law 97-415 (96 stat. 2067)(1983). sec. 20 added subsec. "c".

"b. (1) As soon as practicable, but not later than 42 U.S.C. ****
October 31, 1982, the Administrator shall, by rule, pro- ****
pose and within 11 months thereafter promulgate in final form, /221 standards, general application for the protection of the public health, safety, and the environment from radiological and non-radiological hazards associated with

the processing and with the possession, transfer, and dis- 42 U.S.C. 2*14
posal of byproduct material, as defined in section 11 e. (2)
of this Act, at sites at which ores are processed primarily
for their source material content or which are used for the
disposal of such byproduct material.

"If the Administrator fails to promulgate standards in Promulgations
final form under this subsection by October 1, 1983, the authority
authority of the Administrator to promulgate such stand-
ards shall terminate, and the Commission may take
actions under this Act without regard to any provision of
this Act requiring such actions to comply with, or be
taken in accordance with, standards promulgated by the
Administrator. In any such case, the Commission shall
promulgate, and from time to time revise, any such
standards of general application which the Commission
deems necessary to carry out its responsibilities in the
conduct of its licensing activities under this Act. Require-
ments established by the Commission under this Act with
respect to byproduct material as defined in section 11 e. 42 U.S.C. 2*14
(2) shall confirm to such standards. Any requirements
adopted by the Commission resection such byproduct
material before promulgation by the Commission of such
standards shall be amended as the Commission deems
necessary to conform to such standards in the same
manner as provided in subsection f.(3). Nothing in this
subsection shall be construed to prohibit or suspend the
implementation or enforcement by the Commission of
any requirement of the commission resection byproduct
material as defined in section 11 e.(2) pending promulga-
tion by the Commission of any such standard of general
application. 222/ In establishing such standards the Admin-
istrator shall 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. 223/

"(2) Such generally applicable standards promulgated
pursuant to this subsection for nonradiological hazards
shall provide for the protection of human health and the
environment consistent with the standards required under
subtitle C of the Solid Waste Disposal Act, as amende,
which are applicable to such hazard: Provided, however,
That no permit issued by the Administrator is required
under this Act or the Solid Waste Disposal Act, as

amended, for the processing, possession, transfer, or disposal of byproduct material, as defined in section 11 e.(2) of this Act. The Administration may periodically revise any standard promulgated pursuant to this subsection.

221/ Public Law 97-415 (96 stat. 2067)(1983), sec. 22 added this language to sec. 275b(1).

222/ Public Law 97-415 (96 stat. 3039)(1983), sec. 18 change subsec. b from months after enactment of this section to current language.

223/ Public Law 97-415 (96 stat. 2067)(1983), sec. 22 added this language at end of subsec.b

Within three years after such revision of any such standard, the Commission and any State permitted to exercise authority under section 274 b. (2) shall apply

42 U.S.C. 2021 such revised standard in the case of any license for byproduct material as defined in section 11 e. (2) or any revision thereof.

Publication in Federal Register

Notice, hearing opportunity

"c. (1) Before the promulgation of any rule pursuant to this section, the Administrator shall publish the proposed rule in the Federal Register, together with a statement of the research, analysis, and other available information in support of such proposed rule, and provide a period of public comment of at least thirty days for written comments thereon and an opportunity, after such comment period and after public notice for any interested person to present oral data, views, and arguments at a public hearing. There shall be a transcript of any such hearing. The Administrator shall consult with the Commission and the Secretary of Energy before promulgation of any such rule.

Consultation

"(2) Judicial review of any rule promulgated under this section may be obtained by any interested person only upon such person filing a petition for review within sixty days after such promulgation in the United States court of appeals for the Federal judicial circuit in which such person resides or has his principal place of business. A copy of the petition shall be forthwith transmitted by the clerk of the court to the Administrator. The Adminis-

Judicial review

trator thereupon shall file in the court the written submission to, and transcript of, the written or oral proceedings on which such rule was based as provided in section 2112 of title 28, United States Code. The court shall have jurisdiction to review the rule in accordance with chapter 7 of title 5, United States Code, and to grant appropriate
* U.S.C.**** relief as provided in such chapter. The judgment of the court affirming, modifying, or setting aside, in whole or in part, any such rule shall be final, subject to judicial review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28, United States Code.

"(3) Any rule promulgated under this section shall not take effect earlier than sixty calendar days after such promulgation.

"d. Implementation and enforcement of the standards promulgated pursuant to subsection b. of this section shall be the responsibility of the Commission in the conduct of its licensing activities under this Act. States exercising authority pursuant to section 274 b. (2) of this Act
42 U.S.C. 2*21 shall; implement and enforce such standards in accordance with subsection o. of such section.

42 U.S.C. 2014 "e. Nothing in this Act applicable to byproduct mate-
42 U.S.C. 7401 rial, as defined in section 11 e.(2) of this Act, shall affect
the authority of the Administrator under the Clean Air Act of 1970, as amended, or the Federal Water Pollution Control Act, as amended. /234

ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
234/ Public Law 95-604 (92 stat. 3039)(1978). sec. 206 (a) added sec. 275.

"f.(1) Prior to January 1, 1983, the Commission shall not implement or enforce the provisions of the Uranium Mill Licensing Requirements published as final rules at 45 Federal Register 65521 to 65538 on October 3, 1980 (hereinafter in this subsection referred to as the 'October 3 regulations'). After December 31, 1982, the Commis-

Uranium mill licensing requirement regulations

Implementation

sion is authorized to implement and enforce the provisions of such October 3 regulations (and any subsequent modifications or additions to such regulation which may be adopted by the Commission), except as otherwise provided in paragraphs (2) and (3) of this subsection. and enforcement

"(2) Following the proposal by the Administrator of standards under subsection b., the Commission shall review the October 3 regulations, and, not later than 90 days after the date of such proposal, suspend implementation and enforcement of any provision of such regulations which the Commission determines after notice and opportunity for public comment to require a major action or major commitment by licensees which would be unnecessary ifÄÄ Review, public comments, and suspension

"(A) the standards proposed by the Administrator are promulgated in final form without modification, and

"(B) the Commission's requirements are modified to conform to such standards.

Such suspension shall terminate on the earlier of April 1, 1984 or the date on which the Commission amends the October 3 regulations to conform to final standards promulgated by the Administrator under subsection b. During the period of such suspension, the Commission shall continue to regulate byproduct material (as defined in section 11 e.(2)) under this Act on a licensee-by-licensee basis as the Commission deems necessary to protect public health, safety, and the environment.

"(3) Not later than 6 months after the date on which the Administrator promulgates final standards pursuant to subsection b. of this section, the Commission shall, after notice and opportunity for public comment, amend the October 3 regulations, and adopt such modifications, as the Commission deems necessary to conform to such final standards of the Administrator.

"(4) Nothing in this subsection may be construed as affecting the authority or responsibility of the Commission under section 84 to promulgate regulations to protect the public health and safety and the environment. 225/ 42 U.S.C. 2114

"SEC. 281. SEPARABILITY.ÄÄIf any provision of this Act or the application of such provision to any person or cir- Separability

cumstances, is held invalid, the remainder of this Act or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.

"SEC. 291. SHORT TITLE.ÄÄThis Act may be cited as the `Atomic Energy Act of 1954'." Short title

ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ

238/ Public Law 97-415 (96 stat. 2067). sec. 18 subsec. "f"

CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of June 1988, copies of the foregoing "Brief of Respondents" was served on parties by placing a copy in the mail, postpaid, to the following:

Anthony J. Thompson, Esquire
PERKINS COIE
1110 Vermont Avenue, N.W., Suite 1200
Washington, D.C. 20005

Peter J. Nickles
Richard A. Meserve
Soya D. Winner
COVINGTON & BUGLING
1201 Pennsylvania Avenue, N.W.
P.O. Box 7566
Washington, D.C. 20044

Michael Aisle
STEPHENSON, CARPENTER, CLOUT & OLMSTED
Bonum Building
141 E. Palace Avenue
Santa Fe, NM 87501

E. NAIL JOHNSON
Attorney
Office of the General Counsel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

(301) 492-1634

-END-